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Self-Injurious Behaviour in Male Prisoners: The Role of Personality Disorder and Dysfunctional Beliefs

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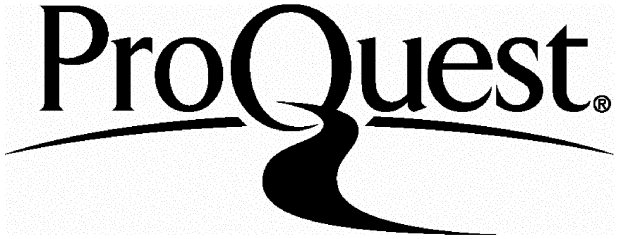

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ABSTRACT

Self-injury amongst men constitutes a significant problem in the prison system. While a significant body of research has investigated this problem, there remains a need for a fuller understanding of clinically-relevant variables that are associated with such behaviour. This study considers the possible association of personality disorder and dysfunctional beliefs with self-injury, and specifically addresses the importance of borderline personality disorder (BPD) and antisocial personality disorder (ASPD).

73 prisoners (40 identified as self injurers and 33 control participants) from a local prison were interviewed. Presence of BPD and ASPD were assessed using a psychiatric interview (SCID-II). The dysfunctional beliefs commonly associated with these and other DSM-IV personality disorders were assessed using the Personality Belief Questionnaire (PBQ).

Overall analyses indicated that two thirds of the entire sample met full criteria for diagnosis of ASPD, and almost a third received a diagnosis of BPD. The two disorders were found to be highly comorbid.

A comparison of those identified as self-injurers and those used as control participants indicated that those who had self injured were more likely to have BPD. Regarding dysfunctional personality beliefs, initial analyses suggested that the PBQ measure had good psychometric properties, and avoidant and borderline beliefs were more strongly endorsed by those who had self injured than control participants. The results are discussed in light of previous research findings. The implications of the study for the future treatment and management of those with personality disorders in the prison system are further considered.

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CHAPTER ONE: INTRODUCTION

Background

Self-injury presents a major management challenge within the English prison system. Rises in the prison population and resulting problems of overcrowding have received increasing media attention. An apparent concomitant increase in the prevalence of self-injury within prisons has been accompanied by increased research efforts aimed at uncovering the underlying relationships between the characteristics and experiences of prisoners and their propensity to self-harm. To date, while a body of research has investigated factors associated with such behaviour, the use of diverse definitions in studies has hampered cross-study comparisons. Consequently, progress in understanding the phenomenon and in making therapeutic recommendations has been limited. The current study aims to complement what is already been empirically established, with a particular focus on the clinically relevant areas of personality disorder and maladaptive beliefs.

Overview of the Chapter

This study will first consider the issues associated with the definition of self-injurious behaviour before presenting the definition that will be used throughout the current study. The scale and significance of the problem of self-injury in both the general and prison populations will then be reviewed. Following this, the issue of psychiatric difficulties within prison settings will be considered. What is known about the aetiology and functions of self-injurious behaviour will then be reviewed, before progressing to outline issues associated with personality disorder, whose possible association with self-injury will be investigated in the current study. The psychological model that will be used to conceptualise personality disorder will then be presented, followed by an outline of relevant information relating to the two specific personality disorders that will be investigated here: borderline personality disorder (BPD) and antisocial personality disorder (ASPD). Research findings, both direct and indirect, which provide evidence of a link between these two disorders and self-injury will then

be detailed. Finally, how the current study intends to build on previous research will then be outlined, and the research questions to be investigated specified.

Defining Self-injury

Research in this area indicates that acts of deliberate self-harm are relatively common, particularly in prison settings. However, work in this field has been characterised by the use of various definitions; reflecting different assumptions about the nature of such behaviour, and differing in terms of which behaviours are referred to. It is therefore first necessary to consider the various definitions that have been proposed, and the issues associated with these, in order to provide a context and rationale for the definition used in the current study.

Within the broad field of self-harming acts, the first and perhaps most straightforward division was made by Favazza (1987), who distinguished between pathological acts of self-harm and those that are socially or culturally sanctioned. The latter concern behaviours such as piercing and tattooing, which are characterised by their symbolic value, denotion of group membership or identification, or as expressions of spirituality. In contrast, acts of pathological self-harm represent deviations from prevailing norms and are committed by individuals as isolated acts. Given their very nature then, acts of pathological self-harm may become the subject of clinical interest, and it is with such behaviours that this work is concerned.

Within the field of pathological self-harm, a highly contentious issue has been the relationship between suicidal and self-injurious acts. In particular, debate has centred on whether such acts are meaningfully separable from each other. Traditionally, all intentional acts of self-injury were grouped under the rubric of suicidal behaviour, with all nonfatal acts being classed as 'attempted suicide' (Liebling and Krarup, 1993). Given that suicide is defined as 'the act of intentionally killing oneself' (Oxford English Dictionary, 1996), the term attempted suicide implies that although the outcome of the behaviours was not fatal, the individual's intent had been to die. However, a number of prominent workers in this field have questioned this assumption. Hawton and Catalan (1987), for example, comment that attempted suicide is used to describe behaviours that, in perhaps the majority of cases, do not involve serious suicidal intent. To take account of such criticism, Kreitman (1977) introduced the term

'parasuicide' to refer to all acts of non-fatal self-injurious behaviour. This term carries the advantage that it does not imply anything about the individual's intent, which is often difficult to establish. Consequently, the term has been widely used, having been favoured by a number of prominent authors, most notably Linehan (1993). However, others object to the use of the term on two main grounds. First, the name itself implies a firm link with suicidality. A second, more fundamental objection is that a broad definition of this kind obscures potentially important distinctions between suicidal and non-suicidal persons (Van Herrigeen, 2001).

One approach that has been proposed to differentiate individuals who intend to kill themselves from those who do not involves the assessment of the lethality of the method selected. Researchers supporting this approach argue that this judgement can then be used as an index of suicidality, with more potentially lethal methods being equated with greater suicidal intent (O'Donnell et al., 1996). Such an index may be useful in particular cases, for example, when it is thought that an individual's claim to have been suicidal may be spurious. However, such an approach cannot be used as a general means to infer the individual's, not least because individuals may be ignorant about the dangerousness of the method they choose, or they may select potentially lethal means because less lethal methods are unavailable (Beck, Beck and Kovacs, 1975). The latter point is particularly relevant to prison settings, where access is especially restricted.

Despite the complexities inherent in determining intent in self-injurious behaviour, the importance of this variable in informing a psychological understanding of such behaviour is clear when one considers the *function* of the behaviour for the individual. The idea that self-injury is functionally distinct from suicidal behaviour appears to have been advanced as early as 1938 by Menninger. Specifically, he wrote that "local self-destruction is a form of partial suicide to avert total suicide" (p271), with the implication that such acts may be intended to bring about an outcome other than death. However, in his use of the term 'focal suicide' to refer to self-injury he linked the behaviour in

name to suicide. Other workers in this area have therefore gone further in separating self-harm from suicide, emphasising functional distinctions.

Arguably the most influential work in differentiating self-injurious behaviour from suicidal acts has been the work of Pattison and Kahan (1983). They proposed a clinical typology of self-injury based on their review of the literature in this area, in particular the work of Morgan (1979). Coining the term 'deliberate self-harm' (DSH), the authors stated that, "such behaviour may not be suicidal in intent, but rather life preservative". Similarly, Favazza (1987) has emphasised that self-injurious acts are aimed at ending negative feelings rather than life itself. The significance of Pattison and Kahan's work was that it started to conceptualise some acts of self-harm as morbid forms of coping rather than as failed suicide attempts. One of the important distinguishing features of this definition is the notion of 'expressed intent', which refers to what the individual said about the meaning of the self-injurious act at the time of its occurrence (Shea, 1993). Whereas previous definitions sought to explain suicide purely in terms of its outcome for the individual, this definition seeks to differentiate typologies of self-injury based on the underlying goals and motivation of the individual. As well as providing the beginnings of a psychological mechanism to explain the underlying processes involved in self-injury, the definition also allows a potentially more positive interpretation of acts of self-harm than had been previously available. Research findings showing that individuals who report different motivations underlying their self-destructive behaviour have different clinical profiles (Franklin 1988; Fulwiler et al., 1997) lend empirical support to the position that suicidal and self-harming behaviour are separable.

While the introduction of the term DSH marked progress in this area, and indeed has been widely adopted to refer to self-injurious behaviour, a number of limitations of the term and the typology to which it relates are evident. Regarding the term itself, this has been criticised on the basis that it is a semantically inaccurate way of describing self-injurious behaviour, in that 'deliberate' implies that the behaviour is unhurried and follows a degree of forethought, when in fact the behaviour may well be impulsive (Crighton and Towl, 2000). Additionally, DSH arguably lacks specificity, in that 'harm' could

include behaviours such as substance abuse or smoking. Although medical evidence indicates that these are indeed behaviours that can cause harm, they are associated with relatively long-term health risks, and it therefore seems implausible that they can be meaningfully grouped with those leading to immediate harm.

A further limitation of Pattison and Kahan's typology relates to its emphasis on a low lethality of method as a typical feature of non-suicidal self-harm. As mentioned earlier, restricted access to means may lead individuals to select highly lethal methods, while reporting low intent to die. This has been observed to be the case in settings such as prisons, and thus the relevance of the typology may be limited on these grounds (Livingston, 1997).

Another approach to differentiating self-injury has been to use specific terms to describe particular behaviours. Two notable examples are 'self-burning' (Soni Raleigh & Balarajan, 1992) and 'self-poisoning' (Bancroft and Marsack, 1977). A key advantage of such an approach is that sub-grouping in this way may facilitate research studies into particular behaviours, as it is plausible that different kinds of self-injury may have a symbolic or functional significance of their own. Having said this, while these terms may be useful in some contexts, again the individual's environment may influence the method that is selected. Consequently, method-specific terms may lead to the inappropriate exclusion of some self-injuring individuals, whose choice of method reflects principally the constrained environment. A further problem with relatively specific terms is that they may actually lack the definitional precision that might be assumed to underlie their use. For example, 'self-mutilation', is a widely used term, particularly in the North American literature, which generally refers to self-laceration and is often used interchangeably with 'self-cutting' (Nelson and Grunebaum, 1971) and 'wrist-slashing' (Greenspan and Samuel, 1989). However, self-mutilation has also been used to describe diverse forms of self-injury, such as hanging and overdosing (Shea, 1993). In the absence of a clear definition of self-mutilation, and on the basis that it suggests physical destruction, which does not invariably result, this term has not been deemed generally useful.

Clearly then, this remains a contentious area, with debate continuing on the issues outlined above. For the purposes of the current study, however, there is a need to make use of an appropriate working definition which takes account of the above points. To this end, the term 'Intentional Self-Injury' (ISI) will be adopted here, as advocated by Crighton and Towl (2000). The term refers to any self-inflicted injury and supports the notion that such behaviour is potentially meaningfully separable from suicidal behaviour in many cases. Whether an act committed by an individual is best understood as one that was principally suicidally motivated, or was essentially self-injurious in nature, will be established in the current study on the basis of the individual's retrospective self-report of their intent prior to committing the act.

Whilst direct questioning to ascertain intent is not without its flaws - for example, some individuals may be confused or uncertain about their intent - this appears to be the best method for distinguishing self-injury from attempted suicide. It is clearly less inferential than relying on indications of lethality derived from case notes, as other studies have done.

The term ISI also circumvents some of the central criticisms of the DSH term (Pattison and Kahan, 1983). Specifically, 'injury' is more precise than 'harm', in that it refers to immediate harm. Further, 'intentional' denotes only that the behaviour is done on purpose and does not suggest any degree of forethought or planning. The term has the further advantage that it is not method-specific, and as such takes due account of the restrictive nature of the setting.

ISI is therefore adopted within this thesis as the definition for those who harm themselves. This is on the grounds that it encompasses all acts which lead to physical harm or hurt, including diverse types of behaviour such as: cutting, burning, strangulation, hanging, punching walls, overdosing, re-opening wounds, and insertion/ingestion of foreign bodies.

While ISI is the preferred definition in the current study, terms such as self-injury and self-harm are commonplace in the literature, and so these will sometimes be used when referring to previous research.

The prevalence of ISI in the general population will be outlined in the next section, and following this the prevalence of the problem within the prison system will be considered.

The Scale and Significance of Intentional Self-Injury (ISI)

ISI in the General Population

Incidence rates based on locally collected data indicate that around 142,000 people per year are seen in hospitals in England and Wales following an episode of self-harm (Hawton et al., 1997). Data from the same study indicate that the most common method is self-poisoning, followed by self-inflicted wounding, a term subsuming intentional cutting, bruising, and scratching. It is important to note, however, that figures such as these include acts that may be motivated by suicidal intent - that is, attempted suicides - and may thereby lead to an overestimation of the prevalence of self-injury as it is conceptualised here. Counterbalancing this, however, is the fact that many acts of ISI will not receive medical intervention and also the reality that many will go unreported. Further, different methods of self-harm may differentially result in attention from health professionals, distorting impressions of choice of method. For example, Crighton and Towl (2000) suggest that self-poisoning may be more likely to come to the attention of services than, say, repetitive wall-punching or relatively superficial cutting.

Considering figures that do not include possible suicide attempts, figures relating to self-cutting, self-burning and wound re-opening suggest the scale of the problem. Favazza and Conterio (1989) estimate an incidence rate of 750 people per 100,000 of the population per year (Favazza, 1987). Studies relying on self-report suggest that the problem may be even more widespread. Briere et

al. (1990), for example, found that 11% of students in a (North American) university population report having cut or slashed themselves on purpose at some point in their lifetime. In contrast, findings from a recent survey of 8,500 men and women living in the UK (Singleton et al., 2001) showed that 2% of respondents report having harmed themselves in the absence of suicidal intent at some point in their lives. This significantly lower figure may be explained by a multitude of factors, including cultural or national differences, and differential reporting tendencies within different samples.

Considering gender influences in self-injury, it is generally believed that such acts are more commonly committed by women and there is some empirical support for this notion. In particular, data from the survey by Singleton et al. (2001) indicate that 2% of males report having committed an act of non-suicidal self-harm previously, compared with 3% for females. Having said this, findings of higher rates amongst women may reflect the fact that they are more willing than men to report emotional difficulties, as indicated by their markedly higher rates of attendance in mental health services. Ritter and Cole (1992) suggest this phenomenon may derive from a conflict between the male gender role and help-seeking behaviour. Having said this, observations from the Mental Health Foundation suggest that that the apparent gender gap has narrowed over time (Bird and Faulkner, 2000).

Whether or not actual sex differences in rates of self-injury exist, the personal and economic costs of such behaviour are unequivocal irrespective of gender. It is clear that such behaviour frequently evokes strong emotional reactions in health professionals responsible for the individual's care and treatment. Anecdotal evidence suggests that typical reactions to self-injury from medical personnel, who are generally more accustomed to dealing with accidental injuries, involve incomprehension and confusion. Huband and Tatham (2000) observe that negative and uncaring responses are not uncommon and may adversely influence treatment outcome. This point is particularly pertinent in relation to prison settings. For a number of reasons, then, there is a strong case for developing models that help to explain self-injurious behaviour.

ISI in Prisons and the General Population

The definitional problems in relation to self-injury highlighted above have hampered government and prison service attempts to accurately establish the incidence and prevalence of self-injury in the prison system. In particular, the difficulty has centred on distinguishing between failed suicide attempts and intentional self-injury. Despite a relatively longstanding awareness of the need for working definitions to distinguish between the two classes of behaviour, as identified by the Chief Inspector of Prisons (Home Office, 1984), progress has been slow in this regard. Indeed, it is only in the last few years that significant advancements have been made in making figures available to describe the scale of the problem. Recent availability of data from the Safer Custody Group (HM Prison Service, 2002) has improved the accuracy of estimates of rates of self-injury in the prison population. These data, and statistics from other studies commissioned by the Home Office, will be reviewed, after first considering whether this problem is more prevalent in prisons than in the community.

Direct comparisons between rates of self-injury in the general population and the prison system are not possible for multiple reasons. Examples include inconsistent or ambiguous use of definitions across different studies and key differences in how data are presented in different studies. However, there is some evidence to support the view that prevalence rates are higher in prison settings than in the general population, as has been suggested by many authors (e.g. Winchel and Stanley, 1991).

In particular, findings reported in a document for the Office of National Statistics indicated that 5% of male remand prisoners and 7% of male sentenced prisoners report having committed at least one act of self-injury during their *current detention.* These figures are significantly higher than community statistics that relate to *lifetime* acts of self-injury in men (Singleton et al., 2001), as mentioned above.

While it could be argued that this apparent discrepancy reflects under-reporting of self-injury in the community, it should not be assumed that such behaviour will necessarily come to the attention of prison staff.

Indeed, many acts of intentional self-injury will go undetected in prisons, particularly those occasioning relatively minor and covert injuries. Even in a well-managed prison environment it is relatively easy for an individual to conceal self-injury if motivated to do so. Prison regimes commonly involve prisoners spending long periods of time locked in cells, and unless an individual has been identified as posing a particular risk to himself, he is unmonitored throughout this period. Prisoners may be motivated to not disclose self-injurious acts for multiple psychological reasons; for example, because of feelings of shame or anxiety, particularly given the punitive emphasis that pervades such settings. Furthermore, under-reporting may plausibly be more of a problem in male institutions than in those housing women, for the reasons mentioned above in relation to male reluctance to seek help. Even if the apparent higher prevalence of ISI in prisons are partly a function of better detection rates in such settings, it seems unlikely that this factor accounts entirely for the extent of the discrepancy between rates in and outside of prisons. One may presume, then, that self-injurious behaviour is more prevalent in prison samples than in community cohorts.

Comparing rates of self-injury amongst male and female prisoners, there is some evidence that such behaviour is more commonly seen in women. For example, Singleton et al. found that 9% of women on remand and 10% of their sentenced counterparts report having harmed themselves during their current detention. These higher figures mirroring the apparent sex distribution of the behaviour in the community, as referred to above. Although rates of ISI appear to be higher amongst female prisoners, given that men currently comprise 94% of the prison population, it is clear that the bulk of all instances of such behaviour within the prison system are committed by men.

Considering trends in self-injury in prisons, data for the four-year period 1997-2001 collected by the HM Prison Service Safer Custody Group (2002) indicate a consistent pattern of increasing self-harm over this period of time, rising from 47 to 86 per 1,000 male prisoners per year. Paradoxically, such apparent increases in self-injury may actually, in part, reflect a positive shift within prisons towards improved detection and monitoring. What remains unclear

from these data, however, is how many *different* inmates committed acts of self-injury, as it may be the case that many of the recorded incidents of self-harm are accounted for by multiple acts committed by the same individuals.

Beyond statistics describing the scale of the phenomenon within the prison system, there are further reasons why self-injury represents a particular problem in this setting. Consistent with staff responses to self-injury in the community, as outlined earlier, a number of authors argue that prison staff are generally poor at responding constructively to this behaviour. Of considerable concern is the observation that prison staff frequently view self-injury as trivial and attention seeking, leading to hostile and counter-therapeutic responses (Livingston, 1997; Crighton and Towl, 2000). While such reactions may be understandable as manifestations of the inevitably authoritarian and punitive culture that broadly characterises prisons, they are likely to compound the problem in many cases. This is concerning given that there is a degree of overlap between self-injury and ultimate suicide (Gunnell and Frankel, 1994), as it seems plausible that if an act of self-injury is not managed constructively in the first instance, the individual may subsequently become more suicidally motivated as a result. Indeed, Watts and Morgan (1994) use the term 'malignant alienation' to describe the observed phenomenon that prior to suicide there is often a marked deterioration in relationships between psychiatric staff and the patient, characterised by emotional distancing and hostility. Clearly then staff responses to and management of ISI are centrally important. The development and dissemination of explanatory models relating to such behaviour should play an important role in engendering more constructive staff responses. Efforts to identify clinically relevant correlates have an important role to play in the construction of such frameworks, and this is central aim of the current study. Before progressing to consider this further, it is first appropriate to consider the prison context in more detail.

Psychiatric Difficulties, ISI and the Prison Context

It is well recognised that prisons are stressful places, and this is reflected in high rates of psychiatric disorder within such settings. In Singleton et al.'s (1998) survey examining psychiatric morbidity in the English prison system higher

prevalence rates for a range of disorders were found compared with community estimates. In relation to depression, for example, data from this study reveal point prevalence rates ranging from 33% for sentenced male prisoners to 56% for male remand prisoners.

While high rates of mental health problems in prisons reflect, in part, the effects of the prison environment, in their review of the effects of prison on mental health, Porporino and Zamble (1984) observe that individuals show considerable variation in how they adjust to prison life. They conclude that profoundly worsening mental health is by no means an inevitable consequence of imprisonment, stating that 'imprisonment serves to exacerbate psychological vulnerabilities and emotional difficulties'. In relation to the specific problem of ISI, Maden et al. (2000) reach a similar conclusion based on extensive psychiatric reviews of sentenced prisoners. Specifically, they argue that the effects of the prison environment cannot account for self-injury solely, concluding that such behaviour is better explained by the presence of 'long-term personality problems' amongst individuals who display such behaviour.

The current study is concerned with such a relationship between ISI and personality problems. Before considering the specific focus of this study it is first appropriate to briefly review what is known about the causes and functions of ISI. This should serve to provide a background to the argument that such behaviour is frequently understandable in the context of personality disturbance.

The Aetiology and Functions of ISI

As discussed earlier, ISI has, in recent years, come to be understood by many in the field as separate from suicidal behaviour. This is on the basis that, whereas the goal of suicide is the nullification of all feelings, ISI frequently represents an attempt to manage difficult emotions. This is supported by Favazza (1998) who argues for a distinction between suicidal and self-harming behaviour. He states that "a person who truly attempts suicide seeks to end all feelings, whereas a person who self-mutilates seeks to feel better" (p.262). Favazza's text includes numerous subjective accounts from self-injurers who testify to the role that self-

injury plays in ameliorating negative affect. Researchers report a range of negative feelings that immediately precede self-harm, though anxiety and anger appear to be most commonly implicated. In many cases, self-injurers also report feelings of unreality or depersonalisation as antecedents to the behaviour (Walsh and Rosen, 1988). What is unclear, however, is whether self-injury is intended to terminate dissociation, or whether dissociation itself acts as a facilitative condition for self-injury, as argued by Pao (1969). Either way, the favoured contemporary conceptualisation of self-injury is of a behavioural way to manage uncomfortable internal experience (Favazza, 1998), recognising that individuals typically describe feelings of relative calm immediately following ISI. Herpertz (1995), for example, discusses the transient relief that commonly follows acts of self-injury, which, from a learning or behavioural perspective, is thought to reinforce the behaviour and, in part, explain its repetition (Bennun, 1984).

To complement subjective and clinical reports of the function of self-injury, Haines et al. (1997) carried out the only empirical investigation of the tension reduction model of ISI. Using a series of neutral and emotionally evocative guided imagery scripts to assess self-injurers' physiological and subjective responses, they found that people with a history of repetitive self-injury showed a significant drop in arousal following self-injury imagery compared to controls. These findings led researchers to conclude that, "psychophysiological arousal may operate to reinforce and maintain ISI".

Regarding more distal causes of ISI, numerous studies have found that the background histories of self-injurers are especially traumatic and/or abusive compared to non self-injuring psychiatric controls (Favazza, 1998). These histories may lay the foundation for profound emotional reactions to events, coupled with difficulties in regulating stress. In terms of precipitants, interpersonal difficulties are most commonly identified as preceding ISI. In particular, conflict, separation, and abandonment are common immediate precursors to self-harm (Favazza, 1998). Graff and Mallin (1967) make the point that once self-injury has become habitual, the stress threshold for such behaviour is commonly lowered, and relatively minor interpersonal events may then trigger self-injury.

While a coping model of ISI is dominant in mental health and psychological literature (e.g. Morgan, 1979; Favazza, 1998), as noted earlier, in institutional settings generally and in prisons in particular such behaviour is commonly viewed as attention–seeking or manipulative and serves to legitimise a hostile staff response, consistent with the punitive nature of prisons (Dexter and Towl, 1995). While ISI may have this function in some cases, it seems that, for the most part, individuals gain something reinforcing from the behaviour in terms of its immediate physiological or affective effects. Even in cases where the individual describes their motivation for self-injury in terms of manipulation or as some kind goal-directed action, this raises the question of why a sub-sample of individuals have recourse to such an extreme form of behaviour to achieve such ends. Feasibly, the behaviour is a marker of a particularly profound degree of desperation on the individual's part and/or a reflection of their relatively deficient skills in achieving his or her goals. Whilst it is accepted here that ISI is likely to be multi-determined in many cases, the argument that individual differences in affect or self-management skills often underlie self-injurious behaviour appears reasonable, and points to the involvement of personality factors. In view of this, the area of personality disorder is in need of review.

Personality and ISI

The Psychiatric Model of Personality Disorder

The psychiatric taxonomies of Kraepelin (1907) and Schneider (1950) in the first half of the 20th Century each detailed pathological personality types, which may be seen as early forerunners of the phenomena that are now termed personality disorders. Attempts to define personality disorders in operational terms began with the advent of the first Diagnostic and Statistical Manual of the American Psychiatric Association in 1952 (DSM-I). Specific diagnostic criteria for all personality disorders were detailed in a subsequent edition in 1980 (DSM-III), a development that served to facilitate reliability of diagnoses and comparability across studies and settings. A further development of DSM-III was the introduction of a so-called *multi-axial* system, which required the

clinician to evaluate the individual on five separate dimensions: I) clinical syndromes (e.g. anxiety), II) personality disorder and mental retardation, III) physical disorder and general medical conditions, IV) psychosocial and environmental stressors, and V) occupational, social, and psychological functioning. The latest version of the DSM, DSM-IV (American Psychiatric Association, 1994), retains the coding of personality disorders on Axis II and provides the following definition of personality disorder:

'an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment'.

Just as different individuals show different personalities, personality disorder can manifest in different ways, and a total of 10 personality disorders are listed in DSM-IV. They are grouped into three clusters that are thought to reflect key similarities between disorders. Cluster A, the 'odd and eccentric' types, includes the paranoid, schizoid, and schizotypal types. Cluster B, the 'dramatic and erratic' types, refers to the antisocial, borderline, histrionic, and narcissistic personality disorders. Cluster C, the 'anxious and fearful' types, subsumes the avoidant, dependent, and obsessive-compulsive types.

Controversies of the Psychiatric Model of Personality Disorder

While DSM-IV provides a widely accepted, standardised definition of personality disorder, there are some difficulties and controversies associated with the construct and its diagnosis. For a full discussion of these issues see Clarkin and Lenzenwegger (1996) or Tyrer and Stein (1993). A few central issues that are of direct relevance to the current study are highlighted.

Regarding practical complexities associated with arriving at a diagnosis, a key difficulty relates to the relationship between personality disorder and mental state difficulties (Axis I problems). As Tyrer and Stein (1993) note, given that personality relates to the individual's long-term functioning, problems

associated with it must be enduring in nature and must pervade every facet of the individual. In contrast, problems associated with Axis I problems (e.g. depression) are definable on the basis of observations or symptoms that stand alone, that is phenomena that are 'superimposed' on the individual's otherwise healthy personality. As such, mental state difficulties can be diagnosed and defined using data from a short time scale relative to personality difficulties, and rely less on inference on the part of the clinician. A more subtle though related point concerns the interplay between Axis I problems and personality disorder. It is well recognised that Axis I and Axis II problems are frequently co-morbid, and Clarkin and Lenzenwegger (1996) observe that controversy persists over whether the presence of Axis I problems may commonly lead to misdiagnosis of personality disorder because of similarities between diagnostic symptoms. Young (1991) argues that this issue is especially relevant in relation to borderline personality disorder (BPD).

A further set of difficulties with the personality disorder construct is more conceptual and theoretical in nature. The first of these relates to whether Axis II problems are more validly conceptualised as dimensional in nature. Consistent with the psychiatric tradition, DSM-IV conceptualises personality disorders as categorical in nature. That is, such conditions are judged to be either present or absent on the basis of specified diagnostic criteria. As such, personality disorders are thought to constitute conditions that are qualitatively distinct from normal personality, comprising traits that are not represented amongst non-disordered individuals. The logic of this position has been seriously challenged in recent years, and in the last two decades there has been a growing consensus that a dimensional approach to personality disorders is more appropriate (e.g. Siever and Davis, 1991; Frances and Widiger, 1986). Arguments in favour of a change in how they are classified point to evidence that the characteristics thought to comprise personality disorders, and the social dysfunctions frequently associated with them, appear to be continuously distributed. In other words, then, personality disorders appear to comprise amplifications of traits found in non-disordered personalities. Livesley et al. (1994) detail the case for a dimensional system.

A second, related point concerns observed co-morbidity between personality disorders. Just as Axis I and II problems commonly co-occur, it is apparent that individuals are frequently deemed to meet criteria for more than one personality disorder, raising the question of whether personality disorders are meaningfully depicted as separate, discrete disorders. The issue of extensive overlap between personality disorders is especially pertinent in the case of BPD. Illustrating this, Siever and Davis (1991) found that 96% of individuals diagnosed with this particular disorder also met full criteria for one or more other personality disorder.

A key further issue relates to the atheoretical stance of the DSM system which seeks only to describe how the various personality disorders manifest, rather than to consider their aetiology or conceptualise them from a particular theoretical standpoint. This approach has the advantage that the system is, as a result, accessible to the widest range of clinicians irrespective of their theoretical and clinical orientation. However, a key disadvantage of this system is that an exclusively descriptive approach clearly has limited explanatory value and says little in terms of treatment possibilities, particularly for those who offer psychological interventions. Of most direct relevance for clinicians are psychological theories, which are intrinsically concerned with dynamic factors and indicate how difficulties might be addressed clinically. Considering personality disorders specifically, numerous theories have been advanced to explain such phenomena. In particular, Beck and Freeman's (1990) cognitive conceptualisations of personality disorders are prominent in the literature and will be considered further here. As will be seen, this framework benefits both from the fact it is inherently concerned with clinical change and also the fact that some empirical efforts have been made to coordinate it with the DSM descriptions of personality disorders

Cognitive Theory of Personality Disorder

Cognitive conceptualisations of personality disorders are based on the principle that systematic errors and biases in information processing are at the root of personality disorders (Beck and Freeman, 1990). From this perspective, such

errors and biases accumulate to form a pervasive, self-perpetuating cognitive-interpersonal cycle that is sufficiently dysfunctional to warrant clinical attention. Dysfunctional beliefs are seen as playing a particularly important role in the development, maintenance, and expression of personality disorders, constituting the cognitive mechanism through which individuals' life experiences are filtered and subsequently interpreted. In considering the basis for the development of these types of belief, Beck and Freeman (1990) highlight the importance of evolutionary mechanisms, and the role that some modes of interpersonal style may have played in conferring increased survival, such as competitiveness, dependence, and suspiciousness. Personality disorders are thought to reflect the under and over-development of these types of interpersonal style, leading to an over reliance on a small set of strategies and consequent inflexible adaptations to the environment.

Within Beck and Freeman's (1990) framework, the fundamental units of personality are so-called 'cognitive schemas', which comprise beliefs reflecting the individuals' beliefs about themselves, other people, and the world. In personality-disordered individuals these beliefs are thought to be extreme, negative, global and rigid. When activated, these schemas are rigidly applied to situations, even when there is strong evidence to suggest that they are unlikely to provide the desired outcome. Often, their interpersonal strategies lead to painful affect, and so the individual develops strategies to prevent or manage their activation.

A central tenet of this model is that different personality disorders are characterised by a specific set of beliefs and an accompanying behavioural pattern. Beck and Freeman (1990) detail beliefs thought to be associated with each of the personality disorders. The proposition that each personality disorder has its own distinct cognitive profile has been tested using the Personality Belief Questionnaire (PBQ – see Appendix 7), which comprises beliefs theoretically linked to personality disorder diagnoses. The PBQ is central to the current study and will be described further in the Method section. The possible associations of two particular personality disorders - borderline personality disorder (BPD) and antisocial personality disorder (ASPD) – with self-injury will be investigated in

the current study, and so these two disorders will now be considered in some detail.

Borderline Personality Disorder (BPD)

Cognitive Model of Borderline Personality Disorder (BPD)

Borderline personality disorder (BPD) is defined in the DSM-IV as:

'*...a pervasive pattern of instability of interpersonal relationships, self-image and affects, and marked impulsivity by early adulthood and present in a variety of contexts*'. (Full diagnostic criteria are listed in Appendix 9).

BPD is relatively commonly diagnosed. Epidemiological studies suggest community prevalence rates for BPD of around 2% (Swartz, 1990). The same data indicate a clear sex difference in relation to rates of the disorder, in that around 80% of those diagnosed with BPD are female (Swartz, 1990). The disorder frequently severely impacts on daily life, and it is therefore unsurprising that prevalence rates are considerably higher in psychiatric patients; the best evidence suggesting that 11% of psychiatric outpatients and 19% of inpatients meet diagnostic criteria for BPD (Kass et al., 1985). Considering male prisoners, the highest rates for BPD seem to exist amongst male remand prisoners (23%), which compares with a rate of 14% for sentenced individuals (Singleton et al., 1998).

As a member of the Cluster B group of personality disorders, along with the histrionic, narcissistic, and antisocial personality structures, BPD shares the features of dramatic and externalising tendencies. Examples of diagnostic criteria for BPD such as recurrent suicidal or self-harming behaviour and chronic anger difficulties, illustrate why the disorder is considered to be one of the most problematic of all the personality disorders, both in terms of its disabling effects on the sufferer and in terms of the social disruption it can cause. Such behaviours are thought to reflect a poorly integrated underlying

personality structure, and this is reflected in Millon and Davis (1996) classification of BPD as one of the so-called 'structurally defective' personality disorders, along with the schizotypal and paranoid types.

As mentioned above, a central assumption of the cognitive theory of personality disorders is that each particular disorder is associated with a distinct profile of beliefs. However, recent research attempting to identify the particular beliefs that characterise BPD has yielded inconsistent results. While Brown et al. (2001) found that borderline psychiatric outpatients, more than controls, endorsed 13 particular beliefs on the PBQ self-report measure, another study using the same measure found that BPD patients are less homogeneous in terms of beliefs (Butler et al. 2001). Specifically, Butler et al. found that BPD individuals clustered into three subgroups, reflecting shared elevations on the dependent and avoidant scales, shared elevations on the histrionic and narcissistic scales, and a prominent elevation on the schizoid scale. Clearly then, the issue of which, if any, constellation of beliefs characterises BPD requires further empirical work.

Aside from the question of whether a particular set of beliefs underpins the borderline individual's functioning, there is greater agreement about the thinking *processes* that operate in BPD. In particular, one of the central cognitive processes underlying BPD is known as 'dichotomous thinking', which leads to the evaluation of experiences in terms of mutually exclusive categories, rather than along a continuum. An example is the appraisal of an individual as 'good' or 'bad'. Such extreme, polarised appraisals underlie extreme emotional and behavioural responses. Further, given the complex and fluid nature of other cognitive processes, dichotomous thinking may abruptly shift from one position to the other in an attempt to make sense of new experiences. This can account for the intense mood swings which are one of the key features of BPD. Beck and Freeman (1990) maintain that the rigid cognitive style and internal dissonance associated with opposing beliefs are sufficient to account for the pronounced emotional reactions that characterise BPD. In view of this, and given that self-injury is frequently understood to constitute a means of managing intense affect, it is perhaps unsurprising that BPD and ISI are commonly thought to be linked.

The relationship between the two phenomena will soon be examined, following a consideration of antisocial personality disorder.

Antisocial Personality Disorder (ASPD)

Cognitive Model of Antisocial Personality Disorder (ASPD)

According to DSM-IV, Antisocial Personality Disorder (ASPD) is characterised by:

'...a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years'.

Evidence of conduct disorder before 15 years is required, and a minimum of three criteria from a list including features such as impulsivity, irresponsibility, and deceitfulness are necessary for diagnosis. Full diagnostic criteria are listed in Appendix 9.

While all personality disorders are associated with some degree of social dysfunction, the negative impact on society of ASPD is, by definition, especially great. Diagnostic criteria for the disorder reflect longstanding patterns of social irresponsibility and law breaking. Prevalence rates for the general population, based on studies undertaken in the USA, suggest prevalence rates of 2.6% (Robins et al.,1984; Robins & Reiger, 1991), with a sex distribution of 80% men and 20% women. Unsurprisingly, far higher prevalence rates are found in prison populations, with UK figures suggesting rates amongst remand and sentenced male prisoners of 49% and 63% respectively (Singleton et al., 1998).

Within Beck and Freeman's (1990) conceptualisation of ASPD, the features consist of the disorder are over-developed behavioural strategies of combativeness, exploitativeness and predation, coupled with underdeveloped empathy, reciprocity and social sensitivity. Regarding the cognitive profile of ASPD, unlike the majority of other personality disorders, the specific beliefs proposed by Beck and Freeman (1990) to underlie this particular disorder have not been empirically investigated. This was because in Beck et al.'s (2001)

validation of the Personality Belief Questionnaire there were insufficient numbers of individuals diagnosed with ASPD to establish whether the proposed belief set for the disorder was indeed differentially associated with it. However, examples of core beliefs thought to characterise the disorder are: "I need to look out for myself", and "I should do whatever I can get away with". The 14 beliefs proposed to be differentially associated with ASPD can be seen in the Personality Belief Questionnaire (see Appendix 7 - items 57-70 inclusive).

Regarding the self-view of ASPD individuals, characteristically this is of an autonomous, obsessively self-reliant individual. Anger is the predominant affect, generally associated with the individual's perception that they have not received what they are entitled to. While the diagnosis of ASPD is generally characterised by troublesome overt behaviour rather than internal suffering, Millon and Davis note that when prevented from 'acting out' on anger, antisocial individuals are inclined to experience pronounced dysphoria (Millon and Davis, 1996). This is an important observation when considering the role of internal affective states in intentional self-injury.

The Relationship between ISI and Personality Disorders

A number of authors note that ISI is not uniquely or exclusively associated with a specific personality disorder (Pattison and Kahan, 1983; Ross and Mackay, 1979). However, the borderline and antisocial personality disorders appear to be most commonly associated with ISI in women and men respectively in community studies (Young, 1991). However, very few studies have focused on the possible association between these disorders and ISI in prisons, despite the clinical significance of so doing.

BPD and ISI

Of all the personality disorder diagnoses, BPD is most commonly linked with ISI. Indeed, a study by Herpertz (1995) found that 48% of a sample of self-injurers met full DSM-IV criteria for BPD. Further, ISI is displayed by between 70-80% of patients who meet DSM-IV criteria for borderline personality disorder (Bohus et al., 2000).

It appears, then, that a substantial proportion of self-injurers are diagnosable as having BPD, and the large majority of individuals with the diagnosis exhibit this form of behaviour. It is important to note, however, that one of the diagnostic criteria for BPD is 'recurrent suicidal behaviour, gestures, or threats, or self-mutilating behaviour', and so the apparent relationship between the two variables may be in part a function of such circularity. Indeed, when Herpertz (1995) removed the self-destructive behaviour criterion from analyses, the number of self-injurers with BPD diagnoses fell to 28%, a drop of 20% from the original total. Consequently, some authors have expressed concern that a BPD diagnosis may be too readily assigned when ISI is evident (Ghaziuddin et al., 1992). However, the ISI criterion constitutes only one of five criteria necessary for a DSM-IV diagnosis of BPD, and the clearly specified operational criteria in DSM-IV should serve to reduce the extent to which the ISI and BPD are spuriously related.

The evidence for an association between ISI and BPD is stronger for women than men. This may be partly attributable to the fact that most studies in this area either involve all female samples or, in mixed samples, include a predominance of women. Therefore, most of the literature examining the relationship between BPD and ISI refers to women. In an early study by Schaffer (1982) comprising a mixture of in and outpatients (N=28), self-mutilators could be distinguished from matched controls on a number of assessments of borderline pathology, incorporating both categorical and dimensional measures. Specifically, they were found to show higher rates of a prior diagnosis of BPD, based on DSM-II criteria, showing a rate of 71% versus 14%. Self-injurers also scored more highly on Gunderson's Interview for Borderlines, a semi-structured interview assessing borderline symptomatology. The overall greater borderline pathology amongst the self-injurers reflected difficulties with impulse and affect control, psychotic symptoms and interpersonal problems. However, this study provides stronger evidence for the link between ISI and BPD in females, given that 10 of the 14 in each group were female.

A later study by Simeon et al. (1992) compared self-mutilators with non-self-mutilators (N=52) matched on a number of variables, including Axis II diagnosis. Rates of BPD for each group were 57.7 and 61.5% respectively. While the matched design of this study meant that they could not be distinguished on this basis of BPD diagnosis, the self-mutilating group were distinguishable from the control group in terms of higher scores on nearly all of the scales of the Schedule for Interviewing Borderlines, a semi-structured interview tapping borderline traits. They also showed higher levels of prior aggressive behaviour and greater anger difficulties, and obtained higher mean scores on an MMPI measure of antisocial thinking and attitudes. The authors suggested that individuals who self-mutilate have more severe borderline pathology than controls also diagnosed with BPD. As with the previous study, the study comprised groups containing a majority of women (20 out of 26).

Regarding prisoners displaying ISI, surprisingly few studies have investigated the presence of BPD in such a cohort. However, one study by Coid et al. (1992) involving female prisoners with a recent history of self-harm (N=74) identified two sub-groups within the same sample. Members of each group were found to differ on a number of variables. One cluster was termed the 'endogenous group' because no obvious life event or stressor could be identified as a precipitant to self-harm. Members of the second cluster, the 'reactive cluster', were either able to identify a clear precipitating stressor or, in a small number of cases, reported having responded to psychotic symptoms. This cluster was distinguishable from the former in terms of higher rates of BPD and greater self-reported reliance on ISI to obtain relief from affective symptoms. While this study included only self-injurers and did not seek to compare rates of BPD with controls, the overall rate of BPD of 70% is significantly higher than base rates of the disorder amongst unselected female prisoners, which Singleton et al. (1997) found to stand at 20% . This suggests that BPD is a disorder that frequently characterises female self-injurers in prison.

Regarding male self-injuring prisoners, no large scale studies have investigated the prevalence of BPD amongst this sub-group. The only relevant study in this area was carried out by Franklin et al. (1988), who investigated BPD in a small

sample of prisoners in an American institution. Prisoners were divided into three groups according to reasons they gave for having self-injured: specifically, 'no reason given' (n=32), 'suicidal intent' (n=17), and 'to achieve a goal other than suicide' (n=15). The groups were then compared in terms of rates of BPD using DSM-III criteria. Individuals who reported reasons other than suicide as motivation for self-harm - that is, individuals who committed an act of ISI as defined in the current study - were found to receive more BPD diagnoses than the other groups, though the actual rates of the disorder were not reported. This suggests that the role of BPD in ISI is worthy of exploration in a male prison population.

ASPD and ISI

While BPD and ISI have been considered to be strongly associated in women, Winchel and Stanley (1991) suggest that self-injury amongst men is most often thought to be associated with ASPD. This is supported by Morgan's (1975) study of individuals treated in an accident and emergency department following an act of deliberate self-harm. Male self-harmers were found to have more extensive histories of antisocial behaviour - both in terms of higher incidence of probation and court proceedings before the age of 17 and higher rates of previous convictions and imprisonment - compared to female self-harmers and the general population. Similarly, data from Moran's (1999) epidemiological study indicate that self-injury is frequently associated with ASPD amongst men in the community.

On the basis of the above findings alone, a link might be expected between ASPD and self-injurious behaviour amongst male prisoners. In addition, observations that high rates of self-injury occur in male prisons may serve to strengthen the perception that ISI and ASPD are closely related in prisons, given that institutions house a high proportion of individuals with ASPD. However, no studies have focused on the question of whether male self-injurers are *differentially* antisocial in the prison context. This may not have been investigated because of an assumption that self-injurers would not be distinguishable from non self-injurers on the basis of the ASPD, due to the high base rates of the disorder ASPD in prison settings. Clearly, then, the possible

link between these factors requires exploration, as the literature has not yet provided evidence of a direct relationship between ASPD and ISI in prison settings.

There are indications that male self-injurers in prison exhibit more behaviour that is classifiable as *antisocial*, i.e. behaviour that contravenes institutional rules and order. Lester (1991), for example, found that self-injurers are responsible for higher levels of disciplinary infractions in prisons settings than controls. This finding supports earlier work by Virkkunnen (1976), who compared 40 male self-injuring prisoners diagnosed with ASPD with an equal number of non self-injuring controls with the same diagnosis. The self-harming group were found to have displayed higher levels of institutional violence than the non-self-injuring group. Given that both groups were diagnosed with ASPD and diagnosis is categorical in nature, ASPD itself could not differentiate the groups. However, taking a dimensional approach, it could be argued that self-injuring male prisoners constitute a *more* antisocial group, in that they show higher *frequency* of antisocial behaviour. This implies that the incidence of ISI prisoners may be greater in those inmates with *more severe* antisocial personality disorder. However, as indicated earlier, one of the criticisms of the inherently categorical DSM system is that there is little room to consider degrees of severity of dysfunction, despite the fact that it makes intuitive sense to do so. In view of this, in accordance with a cognitive conceptualisation of personality disturbance, one might expect more severe antisociality to be reflected in more extensive antisocial thinking and appraisals. This might explain why not all ASPD prisoners exhibit ISI. However, the only prison study that has incorporated an inventory that taps antisocial cognition - namely, Shea's (1993) study using the MMPI – found no differences between self-injurers and controls in this resepct (Shea, 1993). Having said this, one study alone is insufficient to discount the possibility that more severe ASPD characterises self-injurers, and the particular scale of the MMPI that is relevant, the 'psychopathic deviate' scale, does not exclusively focus on beliefs.

The assessment of underlying thinking processes is all the more relevant when one considers one of the fundamental criticisms of the ASPD category in

particular: namely, that the majority of the diagnostic criteria relate to overt behaviour, rather than to underlying personality characteristics of the antisocial individual. Millon and Davis (1996), for example, criticise the very limited inclusion of personality traits in the diagnosis. A more trait-based characterisation of the highly antisocial individual can be found in the work of Blackburn on so-called primary and secondary psychopaths, and the notion that a more severe antisocial personality may be particularly associated with self-injury can be evaluated in the context of this framework.

Within Blackburn's classification scheme of psychopaths (1975), which derives from Cleckley's (1941) work on psychopathy, individuals who are 'more' antisocial would be more akin to the so-called 'primary psychopath'. Such individuals display relatively low levels of affect and are more interpersonally dominant than secondary psychopaths, who are characterised by feelings of guilt and anxiety over their own behaviour. Given that primary psychopaths are considered be less prone to strong feelings, it is not clear why they would have recourse to self-injury to manage affect, particularly as such behaviour is likely to lead them to be more dependent on others once injured, which appears inconsistent with the self-reliant personality dynamics of the primary psychopath.

Clearly then, the question of why a subset of antisocial individuals engage in acts of self-injury remains unanswered, and the suggestion that more severe antisocial traits may account for such behaviour appears questionable on theoretical and empirical grounds. Perhaps a more plausible proposition is that is not antisociality per se that accounts for self-injury in the prison context, but instead the *co-occurrence* of antisocial features with borderline pathology (it seems unlikely that borderline pathology *only* will be present amongst prisoner self-injurers given both the high base rates of ASPD in these settings and the frequent co-morbidity of BPD in particular). Testing this hypothesis is one of the central aims of the current study, and research findings which point to borderline features as characterising male self-injuring prisoners will be reviewed, after first outlining some key theoretical and clinical issues relating to sex differences in ASPD, BPD and ISI.

Gender Issues and the Co-morbidity of BPD and ASPD in Prisoners

The fact that BPD is commonly thought to be linked to ISI in women, whereas ASPD is more commonly linked to such behaviour in men, may reflect a societal bias in how men and women's behaviour is understood. As Bach-Y-Rita (1974) notes, male self-injurers compared to their female counterparts in police custody are more likely to enter the criminal justice system than women, and be labelled as antisocial manipulators. Further, the perceived close relationship between BPD and the female gender role may lead to diagnostic bias towards assigning a BPD diagnosis to women and ASPD to men. Such bias may be further influenced by actual differences in how men and women with BPD present. This argument appears to receive some support from a recent study that found significant gender differences in the clinical presentation of BPD. In particular, men showed significantly higher levels of externally directed actions, such as aggressive behaviour (Zlotnick et al., 2002). Feasibly, such behaviour could be readily labelled as antisocial and a corresponding ASPD diagnosis assigned to the individual, thereby overlooking possible borderline pathology.

Paris (1997), a prominent theorist in the field of personality disorder, has argued that antisocial and borderline personality disorders may represent essentially the same pathology but may manifest differently in men and women, shaped by socio-cultural forces. He reviews some facts in support of this argument and includes the observation that men with antisocial personality disorders start to 'appear' more borderline by displaying ISI when prevented from 'acting out' (i.e. discharging strong emotions through immediate action). He illustrates this by referring to the fact that rates of ISI amongst male prisoners are especially high, many of whom would meet full criteria for ASPD.

Paris's (1997) argument presupposes that men who display ISI behaviour in prison do not do so in the community. Although there are indications that a proportion of self-injurers manifest such behaviour across the different contexts - Karp et al. (1991) for example found that 37% of self-injuring prisoners report having harmed themselves previously *outside* of prison – it does indeed appear

that, in the majority of cases, borderline features emerge partly as a function of an interaction with the prison environment.

Paris's question represents a fundamental challenge to the classification of ASPD and BPD as separate disorders, and it is clearly not possible here to directly test Paris's question here. However, a plausible re-interpretation of Paris's observations is that BPD commonly characterises male self-injurers, but that they are inclined to act more externally (i.e. antisocially) in the community than in prison. When in prison, partly as a product of their interaction with the setting, their borderline features may become more evident. It is therefore important to consider what factors in the prison environment have been found to influence the incidence of ISI and to consider how borderline personality features may be relevant in the context of these. Before proceeding to do this, however, it is important to consider a few points in relation to the question of why it is important to explore the issue of whether significant borderline features, in addition to antisocial traits, are indeed present amongst self-injurers.

The Relevance of the Question of BPD or ASPD

Although BPD remains a controversial diagnosis, for a number of reasons its possible presence amongst self-injuring prisoners is an important area for investigation. First of all, although the categorical DSM does not have a system for ranking the severity of personality disorders, most clinicians agree that BPD represents a particularly severe level of pathology. Zanarini and Gunderson (1997), for example, argue that when patients meet criteria for both BPD and ASPD, the borderline diagnosis should be the regarded the more hierarchically significant designation, not least because greater therapeutic optimism is associated with BPD than with ASPD. Indeed, despite longstanding pessimism about the treatability of BPD, recent findings suggest that a range of different treatment approaches can be effective in this regard (e.g. DBT; Linehan, 1994; Bateman and Fonagy, 2001). In contrast, antisocial personality disorder continues to be associated with a significant degree of therapeutic nihilism, despite the fact that the ASPD diagnosis represents an especially heterogeneous category (Costello, 1996). In addition, not only does knowledge that an individual in prison meets criteria for ASPD say little about what intervention

may be attempted with them, a principal focus on this particular diagnosis to the exclusion of borderline pathology may encourage perceptions of self-injurers as essentially antisocial and manipulative rather than as distressed, troubled individuals. The problems associated with labelling individuals in this way were highlighted earlier, and therefore that the question of whether borderline pathology is present amongst self-injuring prisoners is one which has more than just theoretical significance.

Environmental and Interpersonal Factors and ISI in Prison

It is widely acknowledged that adjusting to the prison environment is a generally stressful experience. Smyth et al. (1994) comment, for example, that the majority of new arrivals will experience some initial distress or 'transitional shock' as they adjust to their new surroundings. On this basis, rates of ISI might be expected to especially high during this initial period of incarceration, and there is indeed some empirical support for this. For example, a number of studies have found that around one third of all incidents of ISI in adult prisons are reported within the first week of reception (Albanese, 1983; Kerkhof and Bernasco, 1990). For this reason, Bogue and Power (1995) conclude that remand status is a significant risk factor for self-injury, and while the methodology of such studies has been called into question (Crighton and Towl), this notion appears to make clinical sense. Specifically, prisoners with this particular legal status face an especially uncertain future, not knowing whether or not they will be convicted, and so may therefore experience elevated anxiety, relative to convicted prisoners. However, given that only a minority of remand prisoners display self-injurious behaviour, the view that some pre-existing vulnerability may predispose an individual to ISI seems justified. It is a central contention of the current work that such a predisposition may be in the form of borderline personality disorder. As noted earlier, this particular diagnosis is – amongst other difficulties - associated with poor impulse control and low affect tolerance, and on this basis it is reasonable to propose that individuals so diagnosed will be less able to cope constructively with the inherent uncertainty of remand status. Certainly, although it is unclear why, higher rates of BPD are found in male remand samples than in sentenced samples (Singleton et al.,

1998), which provides indirect support for a link between BPD and ISI in remand status prisoners.

While difficulties in responding flexibly to new situations characterise all of the personality disorders, adjusting to the prison context might be expected to be especially difficult for individuals with BPD. Borderline pathology is associated with pronounced dependency and marked interpersonal sensitivity, and individuals with such difficulties are therefore likely to find enforced separation from others especially difficult to manage without recourse to ISI. In support of this, a recent history of loss of a loved one, whether actual or feared, has been identified as a risk factor for self-injury (Haycock, 1989). Further, the finding that 70% of acts of ISI occurred whilst the self-injuring prisoners were in isolation (Ross et al. 1978) may similarly be understood in the light of BPD difficulties. Borderline individuals are prone to intense feelings of abandonment and would therefore be less able to manage being isolated from others without resorting to self-injury as a means to cope. Having said this, Crighton and Towl (2000) note that the relationship between isolation and ISI may not be as straightforward as the former causes the latter, for the simple reason that isolation is frequently used within prisons as a means for managing ISI, meaning that self-injurers may be disproportionately likely to end up in such conditions. Further, self-injurers may be more likely end up in isolation due to their tendency to more frequently breach institutional rules than other prisoners (Virkkunnen, 1976; Lester, 1991).

Aversive interpersonal experiences in the form of bullying have been found to be related to self-injury in both young offenders and adult prisoners. Concerning young offenders, Power and Spencer (1987) found that almost three quarters of all cases of self-injury might be attributed to the experience of being bullied. Specifically, they found that 50% of young offenders reported having self-injured to avoid conflict with fellow prisoners, and 28% stated that their behaviour had constituted an attempt to bring about a change of location within the prison. While the former statistic appears to constitute fairly direct evidence of the importance of bullying, whether actual or feared, in self-injury, the latter expressed 'goal' may not necessarily relate to bullying, as there may be other

reasons underlying a desired move. Notwithstanding this, it appears clear that bullying may account for a significant proportion of instances of self-injury. This was borne out in the findings of a later study by Inch et al. (1995), which found bullying to be the most common reason for self-injury given by young offenders.

Liebling and Krarup (1993) have highlighted the importance of the relationship between bullying and self-injury in adult male prisoners. They showed that adult male prisoners who had both committed acts of self-injury and attempted suicide were distinguishable from controls on the basis of having reported experiencing custodial bullying. Bullying may also explain why young offenders (aged 15-21) are no more likely to commit ISI when held in young-offender institutions, but do seem to be at a greater risk of doing so in adult establishments (Jones, 1986). Plausibly, their relative youth may render them less capable of managing bullying behaviour by adults.

The relevance of the possible presence of BPD here is that the disorder may make an individual more prone to bullying in the first place. Feasibly, marked dependency, and corresponding attempts to please others that typify the borderline individual, may render such individuals relatively easy targets for exploitation and victimisation. Once initially targeted, a related deficit in self-assertion - frequently observed amongst individuals diagnosed with BPD - may render individuals less able to extricate themselves from the situation by effectively managing interpersonal conflict. Furthermore, while bullying may reasonably be expected to be an almost universally troubling experience, individuals with BPD are profoundly sensitive to others' evaluations and treatment of them and may be expected to experience profound dysphoria in the context of bullying.

Clearly then, a number of environmental and interpersonal factors have a role in the incidence of ISI in male prisons, and suggestions as to how BPD may be relevant to these have been proposed. In each instance the implication is that particular events lead to emotional reactions that the individual manages through recourse to self-injury. A logical corollary of this is that the presence of

emotional difficulties should differentiate self-injuring prisoners from their non self-injuring counterparts, and the evidence in this area will now be considered.

Emotional Difficulties and ISI in Prison

An extensive body of research has found consistent relationships between depression and self-injury in male prison settings (e.g. Livingston, 1997). In their review of the literature in this area, Ross and Mackay (1979) conclude however that depression is, in itself, unlikely to account for ISI. Instead, they suggest that other psychological factors may interact with depression to increase the risk of ISI. An important underlying factor may be borderline pathology. Indeed, depression is one of the predominant affects of BPD, and affective instability in the form of frequent mood swings is one of the diagnostic criteria for the disorder. Not only may individuals with BPD be more susceptible to depressive illness, but also their reliance on maladaptive coping mechanisms may render them less able to manage intense affect, thereby predisposing them to ISI (see next section).

In addition to depression, anxiety is frequently implicated in acts of self-injury, with many prisoners reporting experiencing symptoms of anxiety immediately prior to such acts (Bach-Y-Rita, 1974; Virkkunnen, 1976; Livingston, 1997). Similarly, research involving clinical samples has identified anxiety as an immediate antecedent to such behaviour, and may therefore lend support to the construction of ISI as a means of reducing anxiety across different clinical samples (Bennun, 1984: Winchel and Stanley, 1991). Anxiety seems, then, to constitute a proximal cause of many cases of ISI. The relevance of BPD in this context is that, as with depression, anxiety is typically a feature of BPD, comprising a component of the affective instability that characterises the disorder. Indeed, Millon and Davis (1996) comment that generalised anxiety commonly features in this disorder. It appears then that individuals with BPD are frequently subject to brief and intense episodes of anxiety, and their limited coping resources may lead them to rely on ISI to cope (see next section).

Another emotion that has been well investigated in relation to ISI amongst men is anger. There are strong suggestions that intense feelings of anger characterise

self-injurers. The work of Toch (1975) in the US prison system, which comprised a sample of 381 male prisoners, found that strong feelings of anger and difficulties managing this emotion frequently emerged in individuals' accounts of their acts of self-injury. Data from a second qualitative study further implicate frustration and anger as antecedents to ISI amongst female prisoners (Snow, 1997), suggesting that such emotions may underlie the behaviour across the sexes. Such studies appear to indicate a possible role of aggressive impulses in self-injury. Concerning this, Plutchik (1997) considers that aggressive feelings in response to various kinds of threats may lead the individual to either attack themselves or others to reduce the threat. The suggestion that difficulties regulating anger and frustration may characterise self-injurers in prison has received some empirical support, albeit indirect. In particular, difficulties managing anger may help account for findings that men with a history of ISI have worse disciplinary records in prison than non self-injuring prisoners (Virkkunen, 1976; Lester 1991).

No studies have investigated anger specifically amongst male self-injuring prisoners using standardised measures. Shea's (1993) study, however, compared 30 self-harming prisoners with 30 controls on the MMPI, a well validated and widely used self-report measure designed to tap state and trait processes (Hathaway and McKinley, 1940). Shea found that the former group were characterised by poorly focused hostility, a variable closely related to anger, though considered to be more dispositional in nature. Similarly, other studies comprising clinical samples have implicated anger difficulties in ISI. For example, Simeon et al. (1992) found that chronic anger difficulties discriminate self-injurers from controls. Considering how such findings relate to BPD, anger difficulties are frequently found in cases of the disorder. Indeed, 'inappropriate, intense anger or difficulty controlling anger' is one of the diagnostic criteria for BPD.

Clearly then, anxiety, depression, and anger may play important roles in ISI male prisoners. There are indications that these may be proximal causes, perhaps representing the final pathway leading to ISI. It seems plausible that BPD difficulties may underlie these emotions, as people with the disorder are less

able to cope with these emotions. It is therefore relevant to consider what is known about coping processes in self-injurers.

Coping Processes and ISI in Prison

It has long been apparent that considerable individual differences exist in terms of responses to and outcomes in stress. Coping is considered to be an important mediating variable in this regard. From the perspective of a stress-coping model (Lazarus and Folkman, 1984), coping refers to the cognitive and behavioural efforts the individual makes to manage specific internal and or external demands that are appraised as taxing or exceeding their resources. From this perspective, the emotional impact and consequences of a potentially stressful event are largely determined by coping efforts.

It has already been suggested that individuals who self-harm may be particularly prone to, and less able to manage, strong emotions in response to external events. In addition, acts of ISI are frequently conceptualised as means of coping, albeit maladaptive ones. Coping processes therefore appear relevant to ISI, and so pertinent studies in this area will now be considered.

Two studies have focused specifically on coping resources amongst male self-harming prisoners. The earlier of these by Haines and Williams (1997) compared 19 male prisoners with a recent history of self-harm with 13 prisoner controls and 18 male undergraduates on three self-report measures designed to tap coping strategies. While the findings led the authors to conclude that the self-injuring group were not generally deficient in terms of coping skills, a number of relative weaknesses differentiated the ISI group from both comparison groups. In particular, they were found to rely more on problem avoidance, whilst reporting less perceived control when solving interpersonal problems. Similarly, Dear et al.'s study (2001) compared 82 self-injuring prisoners with 71 prisoners who had not demonstrated such behaviour, and found that self-injurers relied less on active means of coping, both cognitive and behavioural, when dealing with a prior stressful event. Indeed, self-injurers tended to rely on cathartically-based strategies. The constructiveness of the methods adopted were not, however, assessed, and in a subsequent study by

Dear et al. (2001), the quality of strategies employed by each group were classified by blind raters according to whether they were likely to lead to beneficial outcomes for the individual in the prison context. Strategies used by self-injurers were judged to be counterproductive by raters.

Further support for the notion that self-injurers rely on self-defeating coping processes comes from Shea's (1993) study. Essentially, findings indicated that male prisoners with a recent history of ISI show an excessive reliance on 'primitive defence mechanisms', as measured using the MMPI. First explained in the context of Freud's psychoanalytic theory (1946), these phenomena are understood within psychoanalytic theory to represent largely unconscious coping responses that the individual uses to manage anxiety (for a contemporary analysis see Bateman and Holmes, 1995). While defence mechanisms are not equivalent to coping mechanisms, in that the former are considered to operate largely out of unconscious awareness, they have in common the notion that some are less adaptive than others. On this basis, then, consistent findings have emerged that male self-injuring prisoners may rely more heavily on maladaptive processes to manage distress, whether largely conscious or unconscious.

Having considered the literature in relation to coping amongst self-injurers, it is now appropriate to consider how such processes might be linked to borderline pathology, which the current study hypothesises will differentiate self-injurers from other prisoners.

Individuals with BPD are frequently observed to rely on cognitive and behavioural avoidance, and on external attributions of blame when problem solving. Bijttebier and Vertommen (1999) investigated self-reported coping strategies in personality-disordered individuals, as assessed using DSM-IV criteria. Based on a sample of psychiatric inpatients (48% men), the findings were that avoidant coping styles and a lack of social support seeking were associated with BPD, but also with all disorders in cluster A (i.e. schizoid, schizotypal, and paranoid) and avoidant personality disorder, which is in cluster C. ASPD was found to be linked solely to lower reliance on social support seeking. Given that avoidant coping also co-varied with four other disorders,

such a coping style does not appear to be specific to borderline pathology, but does appear to separate BPD from ASPD. On this basis, then, the findings that avoidant coping features highly in self-injurers may point to any one of these five disorders. However, on the basis of the other correlates of ISI in prison settings that were outlined earlier, in particular emotional instability, it seems plausible that BPD may well account for the observed avoidance. It could of course be the case that BPD does not present in isolation, given the high rates of co-morbidity between the avoidant and schizotypal types (Bijttebier and Vertommen, 1999). However, the current study argues for the plausibility of BPD representing a broad, over-arching framework within which the disparate previous findings in relation to ISI within prisons may be integrated, and that borderline personality difficulties may differentiate self-injurers from non-self-injurers. How BPD is diagnosed and differentiated from other disorders now requires some exploration, if such a view is to be substantiated in the current study.

Diagnostic Measures

In order to assess the presence of BPD and ASPD, a psychiatric measure needs to be used. This enables assessment of rates of the respective disorders using standardised criteria. While the value of psychiatric diagnoses is that they allow relatively reliable descriptions of disorders, and thereby facilitate communication between professionals, there are some clear limitations to a purely diagnostic approach. In particular, a potential consequence of the essentially binary nature of psychiatric diagnosis, which requires that disorders be judged to be present or absent, is that some cases of pathology may be 'missed' because a full criteria are not reached.

Considering this potential problem in the context of the current study, while there appears to be a reasonable argument for the presence of borderline pathology in male self-injuring prisoners, it is not clear that individuals exhibiting such behaviour will necessarily meet full diagnostic criteria for the condition. This may particularly be the case if they are less willing to admit to some of the criteria that, as suggested earlier, may be perceived as reflecting more a feminine gender role. Such arguments are at the heart of arguments by

prominent workers in the field who call for a dimensional approach to personality disorders (e.g. Siever and Davis, 1991; Frances and Widiger, 1986). Therefore, as well as looking at rates of actual diagnosis, the current study will investigate the presence of the criteria, thereby approaching the question of borderline characteristics in a more dimensional manner. Further, an assessment of whether self-injurers meet more criteria for ASPD, even if they are not distinguishable from controls using criteria in a categorical manner, will give an indication of whether they have more longstanding behavioural problems than controls.

Dysfunctional Beliefs

A second approach, which is dimensional in nature, will be employed to examine another facet of self-injurers. This follows from the notion that personality problems are evident in individuals displaying ISI, and therefore presenting with dysfunctional beliefs (Beck and Freeman, 1990). For this reason, the presence of dysfunctional beliefs will be investigated. While there are strong indications that such personality problems may characterise self-injurers, no studies have thus far specifically investigated beliefs closely tied to personality functioning. Although Shea's (1993) study used the MMPI, which includes some scales thought to reflect personality functioning, it does not focus specifically on beliefs. Further, while one previous study used the MCMI self-report inventory (Osuch et al., 1999) - which includes scales that comprise items that relate to attitudes about the self, world, and others - the measure also includes many items that relate to behavioural, somatic and affective functioning. In addition, this study did not examine a prison sample, nor did it include a non-self-injuring control group.

The rationale for investigation of maladaptive beliefs is essentially that, while diagnoses are useful in terms of describing the broad features of the sample, and for comparison with other studies, underlying beliefs are likely to be more clinically meaningful. Specifically, diagnoses produce relatively limited data about how interventions might be formulated and directed, particularly given their heavy reliance on behavioural criteria, which may reflect diverse

underlying functions or motivations for the individual. This is especially true for the ASPD diagnosis, and to a lesser extent BPD.

While a small body of research has focused on psychological factors that may be amenable to psychological intervention, such as the investigations into the coping mechanisms outlined above, a focus on the processes that underlie these may complement this picture. Within cognitive theory, beliefs are construed as the fundamental units of personality, and as such are of key importance in determining an individual's response to events. In view of this, they may underlie coping strategies and determine whether they are implemented. For example, a person who holds strongly dependent beliefs may choose not to implement potentially constructive coping strategies (e.g. self-assertion), through fear that these may lead another to abandon them.

There is an insufficient research base to make specific predictions about what sets of beliefs will differentiate the groups. Having said this, in view of the argument that borderline pathology may differentiate self-injurers from controls, and the fact that the disorder is frequently highly co-morbid with a range of other personality disorders, it seems reasonable to expect that borderlines will show higher levels of dysfunctional beliefs across the range of Axis II pathology. From assessing which beliefs self-injurers endorse, it can be determined whether or not self-injurers preferentially endorse borderline or antisocial beliefs.

The Current Study

Research Aims

The PBQ is a very recent measure and has only been used with a clinical population in the context of the validation sample. Therefore, before testing any hypotheses, analyses will first be carried out on the entire sample to determine its basic psychometric properties. Subsequent exploratory analyses will be carried out to determine the PBQ's sensitivity to both BPD and ASPD diagnoses (i.e. whether the presence of one or more diagnosis is linked with higher endorsement of dysfunctional beliefs).

After describing the whole sample in terms of the diagnoses of BPD and ASPD, the current study will compare the rates of BPD and ASPD in a group of self-injuring male prisoners with a prisoner control group. On the basis of the previous research, it is first predicted that BPD will be more evident in the self-injuring group. It is further predicted that, given the evidence for a broad range of borderline features in self-injurers, the self-injury group will continue to differ from the control group once the self-injury/suicidal behaviour diagnostic criterion is removed from the analysis.

The two groups will then be compared to see if ASPD is more frequently present in the self-injury group. While there are indications that rates of ASPD may be higher amongst self-injurers, in that previous studies point to more overt behavioural disturbance, this may be accounted for by higher BPD prevalence. On this basis, the current study is investigating the over-reliance on the assumed relationship between ASPD and ISI, to the neglect of BPD criteria in this cohort, and is predicting that there will be no difference in the frequency of ASPD between the groups.

After considering the issue of diagnosis, exploratory analyses will be carried out with regard to possible differences between the groups in terms of dysfunctional beliefs, as measured by the Personality Belief Questionnaire (PBQ - Beck et al., 2001). The general expectation is that the self-injury group will report higher levels of dysfunctional beliefs, though more specific predictions appear to not be justified by reference to any previous research. The questionnaire comprises scales containing beliefs thought to be related to specific personality disorder diagnoses, five of which have been validated by Beck et al. (2001). If the groups do differ on individual scales, regression analyses will be used to determine which of these best predicts membership to the self-injury group.

Further questionnaires are used to assess levels of depression and social desirability, the latter to assess possible response bias, which may be especially relevant in this setting.

General Aims and Specific Research Questions

The general aim of the present study was to explore the extent of personality disorder diagnoses in a prison population and to explore the relationship between personality disorder and intentional self-injury (ISI) in this population. It is hoped that this will help improve the explanatory models of intentional self-injury that already exist by identifying the clinically relevant correlates of ISI. Specifically, the following general aims and specific hypotheses were generated:

General Aims

1) To establish the basic psychometric properties of the Personality Beliefs Questionnaire (Beck at al. 2001).
2) To establish the prevalence of different personality disorder diagnoses in a prison population

Specific Hypotheses

1) The ISI group will show higher rates of BPD than the control group

2) The ISI group will continue to receive more diagnoses of BPD than controls after self-destructive/suicidal behaviour is removed from analysis

3) The ISI group will **not** differ from controls in terms of rates of ASPD diagnosis and mean number of diagnostic criteria met

4) The ISI group will endorse higher levels of dysfunctional beliefs than controls

CHAPTER TWO: METHOD

Setting

The study took place in an adult male prison located in the South East of England. The prison population, approaching 1,200 men, is housed in the following wings: 'normal location' wings (of which there are six), the vulnerable prisoners unit (for those deemed to be at risk among the general prisoner population), the drug detoxification wing, and the hospital wing. Participants were met in interview rooms located in the healthcare centre.

Ethical Considerations

Ethical approval was obtained from the University College London / University College London Hospital Committees on the Ethics of Human Research. A copy of the approval letter is in Appendix 1. In addition, permission was obtained from the Prison Governor to carry out the research.

It was important to obtain informed consent from participants and for individuals to give this freely before they signed the consent form (see Appendix 2). This was potentially more difficult to achieve in this setting given that individuals have surrendered many of their basic liberties and are accustomed to complying with demands from those in positions of authority. In view of this, considerable effort was made to explain the nature of the study to prospective participants, whilst emphasising at the outset that declining or agreeing to participate would in no way influence their situation within the prison. Each participant was also given an information sheet (see Appendix 3).

Participants

Inclusion / Exclusion Criteria

The focus of this research on intentional self-injury (ISI) meant that members of the self-injury group had to report to the researchers at least one incident of self-injurious behaviour which had resulted in physical damage, but which was non-

suicidal in intent. The control group comprised individuals who had not self-injured intentionally during their current imprisonment.

Individuals who had a history of psychotic illness or who were currently psychotic were excluded from participating in the study. Furthermore, given the complexity of the language in many of the questionnaires, individuals not sufficiently fluent in English, i.e. people who would require the presence of an interpreter, were also excluded. Relevant data to inform decisions about these two reasons for exclusion were obtained from prisoners' medical records.

Recruitment

In order to determine the minimum sample size required to detect genuine differences between the two groups, it was necessary to estimate the likely effect size for the relevant variables under investigation (i.e. borderline personality disorder and dysfunctional beliefs). In order to do this, two previous studies were consulted to make a judgement about the probable magnitude of group differences.

Regarding personality disorder, Schaffer et al.'s (1982) study was used as, like the current study, it compared self-injurers with controls on a measure of borderline symptomatology. While the measure used in the earlier study, the Diagnostic Interview for Borderlines, is not identical to the measure used here (i.e. the SCID-II), both measures incorporate a semi-structured interview format and assess broadly similar domains of personality functioning. They might therefore be expected to show a significant degree of diagnostic overlap.

A web-based statistical package (Rollin, n.d.) was used to calculate the necessary sample size using the following data. Schaffer et al. found overall DIB mean scores of 8.5 (sd .94) for self-injurers and 2.33 (sd 2.33) for controls. Using these means and the larger standard deviation (to allow a cautious estimate of numbers required), and adopting conventional statistical values (i.e. alpha = .05 and power = .80), a minimum sample size of only 12 (six in each group) was computed.

For the second component of the study - the comparison of groups in terms of dysfunctional beliefs - Shea's (1993) prison study was used as the basis for a power calculation, as it incorporated a self-report measure to assess psychopathology, the MMPI (Hathaway and McKinley, 1940). Unlike the PBQ used in the current study, the MMPI does not focus exclusively on beliefs. However, one scale - Lack of Ego Mastery (cognitive) – examines thinking processes and was found to discriminate between the groups in the previous study. In view of this, this particular scale was used as a basis to establish the sample size for the current study. Shea reported means of 71.1 (sd 17.9) and 55.6 (sd 14.3) for the self-injury and control groups respectively on this scale. Again, using these means and the larger standard deviation, and adopting a conventional significance criterion and power value, a minimum group sample size of 21 was calculated to be sufficient to reject the null hypothesis (Rollin, n.d.).

In view of the above calculations, it was considered that 30 individuals in the self-injury group and 30 in the control group would be sufficient to detect an effect in terms of both borderline personality disorder and dysfunctional beliefs.

Potential self-injury group participants were identified using three main methods. First, access was gained to the forms (termed F2052) that record staff concerns about prisoners' risk to self. Second, an incident log that included details of actual self-injury within the prison was viewed. Third, staff based on the hospital wing were asked for names of hospital prisoners who were known to have self-injured.

Potential control group participants were randomly selected from a full listing of current prisoners produced regularly by the establishment's central computer database. This also enabled both groups of participants to be matched for ethnicity, which was necessary because white prisoners appear to be over-represented in groups of self-injurers (Livingston, 1997).

Measures

Demographic Measures

Questions were asked to establish age, ethnicity, level of education, index offence, and the length of time served during their current detention. Further, given that previous research has shown that prisoners on remand are more likely to self-injure than those who have been convicted, information on prison status was gathered, that is whether the prisoner was on remand (i.e. not convicted or sentenced; convicted but not sentenced); or sentenced. For details of demographic questions see Appendix 4.

Intentional Self-Injury Measures

A comprehensive list of self-injurious behaviours was drawn up on the basis of a review of previous research. Participants were then asked how many times during their current detention they had engaged in each behaviour. The suicidal intent of the behaviour was then assessed, based upon the suicidal intent of attempt sub-scale of the Overt Aggression Scale Modified (OAS-M; Coccaro et al., 1991). The OAS-M is a 25-item semi-structured interview containing nine subscales. The subscales include: Verbal Aggression, Aggression against objects; Aggression Against others; Aggression against self; Global irritability, Subjective irritability; Suicidal tendencies.

Intent and Lethality of Attempt

The aggression items of the OAS-M were adapted from the original OAS (Yudofsky et al., 1986). The irritability and suicidality items were adapted from the Schedule for Affective Disorders and Schizophrenia (SADS; Spitzer & Endicott, 1978, cited in Coccaro et al, 1991). The authors do not provide specific questions for the interview. Instead, in order to assess the intention underlying the self-injurious behaviour, the authors recommend that the following areas be evaluated: the likelihood of being rescued; the precautions taken against discovery; the action to gain help during or after the attempt; the degree of planning; and the apparent purpose of the attempt. Suicidal intent of attempt is then rated on a 6-point likert scale from 0 (obviously no intent) to 5

(Extreme, every expectation of death). A behaviour was then classified as self-injurious if there was no suicidal intent (0), minimal suicidal intent (1), or if the participant was ambivalent (3).

Depression

The Beck Depression Inventory-Second Edition (BDI-II; Beck, Steer and Brown, 1996) is a 21-item questionnaire measuring the severity of depression. The questionnaire was developed to assess the symptoms of depression that correspond to the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, - Fourth Edition, 1994) criteria for depressive disorders, covering somatic, affective, behavioural and cognitive domains. Respondents are required to respond to each item by selecting one statement out of four in that best describes their experiences over the previous two weeks. Each statement is rated on a 4-point scale from 0-3, and these scores are then summed to provide a total depression score.

The psychometric properties of the BDI-II have been extensively investigated by Beck et al., (1996). Specifically, the measure has demonstrated good internal consistency, displaying alpha coefficients of .92 for an outpatient psychiatric sample (n=500) and .93 for college students (n=120). In addition, the scale showed a test-retest correlation of .93 among 20 outpatients over a one-week interval, indicating a high level of diagnostic stability. Regarding validity, Beck et al. report a high correlation of .93 between the BDI-II and its precursor the BDI-IA (Beck et al., 1979), and a moderately high inter-correlation with the Hamilton Psychiatric Rating Scale for Depression (r = .71) (HRSD; 1960), both findings indicating good construct validity. Furthermore, evidence of the BDI-II's discriminant validity derives from the fact that the scale is more weakly associated with the Hamilton Anxiety Rating Scale (1959) (r = .47) than it is with the HRSD (r = .51).

Personality Disorder Diagnostic Measure

Two inter-related measures were used to diagnose personality disorders: the Structured Clinical Interview for DSM-IV Axis-II Disorders Personality

Questionnaire (SCID-II-PQ), and the Structured Clinical Interview for DSM-IV Axis-II Disorders (SCID-II; First et al., 1997).

The SCID-II PQ is a self-report questionnaire that allows the examinee to respond with 'yes' or 'no' to a series of statements that correspond to the DSM-IV criteria for each personality disorder (American Psychiatric Association, 1994). The questionnaire comprises a total of 119 items covering all ten DSM-IV personality disorders, though only the 32 statements relating to the borderline and antisocial personality disorders were used in the current study. See Appendix 5 for details of questions relating to the two particular diagnoses under investigation here. The SCID-II-PQ has been shown to be an efficient initial screening measure, yielding a low false negative rate associated with diagnoses of around 1.8% (Nussbaum and Rogers, 1992; Jacobsberg et al., 1995). The same studies do show, however, that false positives (i.e. 'yes' endorsements to items when the corresponding criteria are ultimately judged to be absent) are moderately high. While this feature of the questionnaire does result in some inefficiency, in that follow up questions are then unnecessarily asked, the low false negative rate means that genuine cases of personality disorder are infrequently missed.

Items that are endorsed by individuals as true for them were followed up in the main interview, using the SCID-II (see Appendix 6). The SCID-II does this by asking participants to give specific examples for their previously endorsed statements, to enable the assessor to decide whether the criteria for PD are met. Answers to questions are then rated on a 3-point scale. Whether a personality disorder diagnosis is assigned is dependent on whether a sufficient number of '3' ratings are achieved, each disorder having a threshold for diagnosis. In the case of borderline personality disorder, five such ratings are necessary; for the antisocial type three are required, though conduct disorder must also be judged to have been present before age 15.

Inter-rater reliability for the SCID-II is reported as generally very good (Brooks et al., 1991; Dreessen & Arntz, 1998; Fogelson et al., 1991; Renneberg et al., 1992; Maffei et al., 1997), though test-retest figures are less encouraging. First

et al.'s 1995 multi-site study, for example, found an average kappa statistic of .53 for patient samples (range, .24 to .74) and .38 for non-patient samples (range, .12 to .59), indicating that diagnostic stability is well below acceptable levels for each personality disorder. Having said this, it was also clear from the study that the SCID-II performs comparably in this regard to personality disorder diagnoses assigned using other semi-structured interviews. Less progress has been made in establishing the validity of the SCID-II. This may be partly accounted for by the absence of clear-cut external diagnostic validators. However, since Spitzer (1983) proposed the so-called LEAD[1] method, which draws on longitudinal behaviour to establish the presence of maladaptive behaviour and traits, there has been a more objective standard against which to judge diagnoses. Specifically, in a study comparing LEAD diagnoses with diagnoses obtained using the SCID-II DSM-III-R (American Psychiatric Association, 1987), Skodol et al. (1988) found moderate to high concordance between diagnoses assigned using the respective measures, overall diagnostic power ranging from .45 to .95 across 12 personality diagnoses. Poorest agreement was for the narcissistic type and the best for antisocial disorder, which Skodol (1988) comments may be accounted for by the fact that the latter is more behaviourally-defined and the former is more reliant on clinical inference. In addition to the positive finding for antisocial personality disorder, high concordance between the two approaches was also found for borderline personality disorder (.85). These findings are clearly encouraging in light of the diagnoses which are the focus of the current study.

In the current study, only questions relevant to the assessment of borderline and antisocial personality disorders were administered due to time constraints. Full diagnostic criteria for these disorders are included in Appendix 9.

To ensure the SCID-II was validly and reliably administered and scored, both the author and the colleague received a day of training in the use of the measure by an experienced clinician. Training involved role-play practice of mock interviews, observations of video taped interviews conducted by the trainer, and

[1] LEAD is an acronym for longitudinal expert evaluation using all data.

lengthy discussion of the limitations of the measure and how to manage potential difficulties associated with its use. Once the research was underway, the trainer listened to several audio-taped of interviews conducted by the researchers, and provided feedback on interviewing style as well as offering a judgement as to how many criteria the interviewee met. Strong agreement between both researchers and this third party was observed. To further enhance reliability, regular discussions subsequently took place between the researchers about the scoring of individual cases. While inter-rater reliability was not formally assessed, both researchers were satisfied that consistent scoring judgements were arrived at, irrespective of who carried out the interview.

Personality Belief Questionnaire (PBQ)

Developed by Beck et al. (2001), the PBQ is a self-report questionnaire designed to assess the presence of dysfunctional beliefs (see Appendix 7). The measure consists of 126-items, comprising ten scales. Each item describes a belief associated with a particular personality disorder. Individuals respond using a five point likert scale, denoting degree of belief in each of the items. In an investigation of the psychometric properties of the PBQ, Trull et al., (1993) administered the questionnaire to a sample of 188 college undergraduates. Participants completed the PBQ along with two other well validated measures personality disorder, the MMPI-Personality Disorder scales (MMPI-PD) and the Personality Disorder Questionnaire-Revised (PDQ-R; Hyler et al., 1987). Results indicated high internal consistency for the PBQ (ranging from .77 for the passive-aggressive scale to .93 for the paranoid scale) and good test-retest reliability (ranging from .63 for the passive aggressive scale to .84 for the paranoid scale). Scores on the scales of the measure were highly inter-correlated, ranging from .24 between the schizoid and antisocial scales to 0.65 between the histrionic and narcissistic scales). Convergent validity however was more questionable, with only moderate convergence overall. The paranoid subscale of the PBQ showed the strongest convergence with other measures, followed by the antisocial subscale (.61 and .49 respectively with the corresponding PDQ-R scales, and .66 and .50 with the MMPI-PD scales).

Beck and colleagues' (2001) subsequent study examined the properties of the PBQ using a clinical sample. Specifically, 756 psychiatric outpatients whose personality disorder diagnoses had been determined using the SCID-II, completed the PBQ on one occasion. Again the PBQ demonstrated high reliability estimates (ranging from .81 for the schizoid scale to .93 for the paranoid scale) and inter-scale correlations (.04 for the dependent and schizoid scales to .69 for the dependent and avoidant scales). Further, five of the PBQ's scales were cross-validated with corresponding personality disorder diagnoses. Specifically, patients with the following diagnoses preferentially endorsed PBQ items theoretically linked to their specific SCID-II diagnosis: avoidant, dependent, obsessive-compulsive, narcissistic, and paranoid. Insufficient numbers diagnosed with the remaining DSM-IV categories in the validation sample precluded attempts at validating the other relevant scales of the PBQ. A tenth scale for borderline personality beliefs was empirically generated on the basis of beliefs endorsed across the nine scales of the PBQ by patients diagnosed with borderline personality in a study be Brown et al. (2000).

Marlowe-Crowne Social Desirability Scale (SDS) (Crowne & Marlowe, 1960)

The SDS is a 33-item self-report questionnaire assessing the tendency to present oneself in a socially desirable manner (see Appendix 8). It has long been recognised that individuals may respond to items in a biased manner to questionnaires. While it is not inferred that prisoners are necessarily more likely to respond to measures in a biased manner, given that high levels of antisocial personality disorder are expected in the current sample and deceit and lying are diagnostic criteria of the disorder, this possibility cannot be ruled out a priori. In addition, high levels of psychopathology such as shame may motivate individuals to show response biases and these may plausibly be relevant here. Norms have been derived for the SDS using a range of populations, including inpatients, outpatients, and less psychologically disturbed populations.

Procedure

The study was conducted in collaboration with a colleague, who was interested in the relationship between ISI and a number of additional variables relating to social rank that are not considered in this thesis.

An information sheet (Appendix 3) was given to all participants. Those who indicated they wished to take part were then asked to sign a consent form (Appendix 2) before proceeding to complete the interviews and questionnaires. Throughout the entire process, participants were offered as much help as they required to read the questionnaires, and clarification was offered as appropriate. The whole process typically took place over two sittings, separated by a lunch break of two hours. If a prisoner did not attend at the start of the day, their wing officers would be approached to determine the reason for the non-attendance. Should the prisoner have been unable to attend due to an alternative commitment (e.g. social visit or education), or due to difficulties within the system (e.g. insufficient staff to escort the prisoner), then another appointment would be arranged.

The research required administration of the following measures: the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Spitzer, Gibbon & Williams, 1997); the Personality Beliefs Questionnaire (Beck, Butler, Brown, Dahlsgaard, Newman & Beck, 2001); and the Social Desirability Scale (Crowne & Marlowe, 1960). Each researcher gathered data for both the social rank theory research, and also for the current piece of research relating to personality disorder and dysfunctional beliefs. The demographic, self-injury, and depression data were shared across studies. For all participants the demographic interview questions and the self-injury questions were completed first. The administration of the remaining questionnaires and interviews was then counter-balanced. Both batteries required approximately 1.5 hours to administer, and the questionnaires and interviews within each battery were administered in a set order.

Characteristics of the Sample

Sample Size

The sample comprised 73 male prisoners. 40 of these reported to have intentionally self-injured during their current detention (ISI group), and 33 reported not having done so (control group).

Age and Education

The age range of the sample was 21 – 48 years, with a mean age of 31 years. The sample consisted predominantly of individuals who identified themselves as White British (78.08%), although there were a number of individuals who described themselves as either African-Caribbean (6.85), Asian (2.74), Other-white (4.11), or Other-non-white (8.22). Approximately 64% had no formal qualifications, 11% had obtained GCSEs or equivalent, 19% had achieved a City and Guilds or equivalent vocational training, and the remaining 6% had achieved some other form of qualification (e.g. 'A' levels) either at school or through further education.

Legal Status and Crime

The legal status of participants was as follows: 32.80% on remand, 13.70% convicted but not yet sentenced, and 53.42% convicted and sentenced. Time served by participants during this current imprisonment ranged from 0.25 - 65 months at time of interview. Crimes were classified as either violent, property-related, drug-related, or other, based on a Home Office categorisation system (Home Office Research and Development Statistics, 2002). The breakdown of offences showed that 32.88% had been charged with a violent crime, 34.24% were charged with a property-related crime, 13.70% had been charged with a drug-related crime, and 19.18% were charged with any other crime, a category including driving offences.

Participants who Refused or who were Excluded

If prisoners did not attend for interview it was not always possible to ascertain the reasons for their non-attendance. Further, it was frequently unclear whether a prisoner had actually received a call-up slip asking them to attend to take part in the research. Given this, prisoners were not classified as having refused to participate unless this was established from actually meeting them. A total of six prisoners declined to take part in the study. Of these, two were known to have self-injured.

Participants were compared with individuals who declined to participate on a number of demographic and situational variables in order to determine whether any significant differences existed between the two groups on any of these dimensions. The analyses conducted reflect the fact that only relatively limited details were available on the latter group. Specifically, the participants were compared on the following variables: Age, Time Served (i.e. period of current detention), Ethnicity, and Legal Status (comprising remand, convicted but unsentenced, sentenced).

As Age and Time Served were continuous variables, independent samples t-test analyses were used to investigate possible group differences on these. As both Ethnicity and Legal Status were both categorical variables, chi-square analyses were appropriate to assess group differences. The only difference found related to Age; the 'refusal group' were significantly older than the 'participants group' ($t_{(77)} = 2.17$, $p = 0.033$).

Information necessary to make decisions about exclusion was not always contained in medical records. Consequently, on a number of occasions prisoners were excluded at the point of meeting with a researcher. Specifically seven prisoners were excluded from the study: three on the basis of psychotic symptoms, two due to language difficulties (i.e. would have required an interpreter), and two on the basis that their self-injurious behaviour was motivated with principally by suicidal intent. All of those who were excluded due to psychosis and language difficulties were known to have self-injured.

CHAPTER THREE: RESULTS

Data Screening

Distribution

Before undertaking the analysis, all continuous variables were screened for normality. Specifically, data were checked for skewness and outliers. The term 'skewness' describes a non-symmetrical distribution that violates one of the main assumptions of parametric testing. Some of the variables were positively skewed. This was corrected by converting scores into z-scores and applying a square root transformation for all resulting scores above 2.51 ($p < 0.01$).

'Outliers' are extreme scores that are problematic because they exert undue influence on the sample mean. Cases were identified as outliers if their z-score transformation was three or more standard deviations from the mean. Two such instances were identified, each reflecting extreme scores obtained by individuals on the Personality Belief Questionnaire (raw scores of 495 and 510). Both individuals were members of the ISI group, and their scores on this measure were removed from analyses. Accordingly, the means reported in this chapter reflect their removal.

General Aim 1: Personality Disorder Diagnosis (Descriptives)

Data from the whole sample (N=69; four cases contained missing data and so were omitted from the analyses) were analysed to evaluate the prevalence of borderline personality disorder (BPD) and antisocial personality disorder (ASPD) in the prisoner population. Diagnoses of BPD and ASPD were based upon scores on the SCID –II interview (see Method).

- 66.7% of the sample received one or more personality disorder diagnoses (that is, met the criteria for a diagnosis of either BPD or ASPD or both)
- 30.4% met criteria for BPD
- 3.0% met criteria for BPD only
- 65.2% met criteria for ASPD
- 36% met criteria for ASPD only
- 27.5% meet criteria for both diagnoses

General Aim 2: Psychometric Properties of the PBQ

One of the main aims of this piece of research was to investigate the psychometric properties of the PBQ when used with a prison population. Analyses were conducted to determine the psychometric properties of this scale on the current sample. Complete PBQ scores were obtained for 59 individuals (i.e. 14 missing cases). Reliability analyses were first conducted for the entire sample.

Internal consistency was assessed using Cronbach's Alpha. The borderline beliefs scale was excluded from this analysis because the items that comprise it derive from the other scales (specifically, the avoidant, dependent, paranoid, and histrionic scales), which would artificially raise the inter-scale consistency. The PBQ achieved a Cronbach's Alpha of .92, denoting very high alpha reliability and indicating that the scales of the PBQ are generally well inter-correlated.

At an individual scale level, the scales of the PBQ consistently obtained high reliability coefficients. These ranged from .77 for the Schizoid beliefs scale to .92 for the Paranoid scale, findings paralleling the pattern obtained by Beck et al (2001) in their validation study of the measure. The Borderline scale obtained a reliability estimate of .84, which, while slightly lower than the .87 figure obtained by Brown et al., (2000) in their original validation of the scale, nevertheless represents a moderately high internal consistency. These findings indicate that items comprising each scale are generally very well inter-correlated, and suggest that items are tapping similar constructs in each case. The paranoid beliefs scale is strongest in this regard and the schizoid beliefs scale the weakest.

Table 1 below shows the reliability coefficients for the scales in decreasing order. Each scale is accompanied by a ranking of its relative original placing in Beck et al.'s (2001) study.

Table 1: Scale reliability coefficients and ranking

Scale	*Alpha coefficient*	*Rank in Beck et al. (2001)*
Paranoid	.92	1
Narcissistic	.89	2
Histrionic	.88	5
Avoidant	.85	3
Passive-aggressive	.87	4
Obsessive-compulsive	.87	2
Antisocial	.85	6
Borderline	.84	*
Dependent	.82	2
Schizoid	.77	6

*scale created in different study

Inter-scale Correlations

As can be seen in Table 2, all ten scales of the PBQ were positively inter-correlated, with correlations ranging from modest (dependent and schizoid: 0.35) to moderate (dependent and avoidant: 0.68). This pattern is consistent with findings of Beck et al.'s (2001) study, which also found these two pairs of correlations to be, respectively, the lowest and highest. Specifically, the lowest correlation in the earlier study for the dependent and schizoid scales was .04 indicating a very weak association, and the highest for the avoidant and dependent scale was .69, a moderate association.

The patterns for inter-correlations that emerged here generally make theoretical sense; one would expect the avoidant and dependent scales to inter-relate relatively strongly, whereas the schizoid and dependent would be expected to be unrelated. Encouragingly, intra-scale reliability estimates were consistently better than the inter scale correlations, indicating that items contained within individual belief scales generally grouped together better than did the various, scales themselves. This is encouraging and accords with Beck et al's (2001) validation of the measure.

Table 2: Inter-correlations and reliability estimates for PBQ scales

Scale	*Avoidant*	*Dependent*	*Obsessive-compulsive*	*Narcissistic*	*Paranoid*	*Histrionic*	*Passive Aggressive*	*Schizoid*	*Antisocial*	*Borderline*
Avoidant	.85									
Dependent	.68	.82								
Obsessive-compulsive	.51	.61	.87							
Narcissistic	.49	.49	.51	.89						
Paranoid	.61	.56	.58	.64	.92					
Histrionic	.59	.51	.48	.73	.68	.88				
Passive Aggressive	.54	.56	.55	.45	.70	.56	.87			
Schizoid	.56	.35	.43	.56	.55	.56	.54	.77		
Antisocial	.40	.40	.50	.64	.57	.63	.54	.37	.85	
Borderline	.82	.70	.56	.58	.79	.72	.59	.55	.50	.84

The convergent validity of the PBQ could not be determined in the current study, as this would require the administration of a validated measure of *all* personality disorder diagnoses, whereas only two of these were investigated here (i.e. ASPD and BPD). It was, however, possible to assess the PBQ's ability overall to distinguish between groups who differentially met criteria for the two diagnoses that were assessed.

Relationship Between Number of PD Diagnoses and Total PBQ scores

In investigating the psychometric properties of the PBQ, it is also important to know if individuals who receive a diagnosis of one or more personality disorder achieve a higher overall PBQ score. Accordingly, analyses were undertaken to determine whether the presence of one or more personality disorder was associated with higher PBQ scores (i.e. higher levels of dysfunctional beliefs).

Mean PBQ scores for individuals with no diagnosis of personality disorder (mean = 161.4) were compared to mean scores for individuals with one or more diagnosis (mean = 224.2). A t-test showed that the presence of one or more personality disorder was associated with significantly higher total scores on the PBQ ($t_{(56)} = -3.26$, $p=.002$).

As it was found that individuals with one or more diagnosis of personality disorder scored more highly on the PBQ than those with no such diagnosis, further analyses were conducted to determine whether individuals with two diagnoses would score higher than individuals with one. One might expect that increasing psychopathology, as indicated by the PBQ, would be associated with more diagnoses. A one-way analysis of variance (ANOVA) found a significant difference between means ($F_{(2.55)} = 6.56$, $p = 0.003$). Subsequent pairwise comparisons showed that this was located between the 'no diagnosis' category and 'two diagnoses' category ($p= <.05$), the latter scoring significantly higher on the PBQ overall. No significant differences were found between one and two diagnoses or between 'no diagnosis' and 'one diagnosis', though examination of means indicated a trend in the expected direction (i.e. increasing PBQ totals were associated with higher number of diagnoses). Means and standard deviations for this analysis are presented below in Table 3.

Table 3: Comparison of Individuals' Total PBQ Scores With Personality Disorder Status

Number of PD diagnoses	*Mean PBQ score*	*Std. Deviation*
0	161.3684	66.03300
1	211.3750	66.47315
2	244.8000	73.14877

Given that the presence of one or more personality disorder was linked with higher levels of dysfunctional beliefs (as measured on the PBQ), further analyses were carried out on the nature of the relationships between antisocial and borderline personality disorders and PBQ scores. Specifically, analyses were conducted to investigate whether particular scales of the PBQ would accurately predict whether people had a diagnosis of either ASPD or BPD.

Prediction of BPD Diagnosis

Binary logistic regression analysis was used to evaluate the extent to which different scales of the PBQ could predict membership of the BPD diagnosis group. A stepwise method was used, due to the exploratory nature of the research question. A test of the full model with all predictors entered until the maximum level of specificity was achieved revealed that, although the model was a significant improvement over the constant-only model (X^2 = 10.493, p=.001), none of the individual scales were found to significantly improve prediction.

Prediction of ASPD Diagnosis

Binary logistic regression analysis was used to evaluate the extent to which different scales of the PBQ could predict membership of the ASPD diagnosis group. A stepwise regression model was used due to the exploratory nature of the research question. A test of the full model with all predictors entered until the maximum level of specificity was achieved revealed the model summarised in Table 4. This indicates that the model was a significant improvement over

the constant-only model (X^2 = 11.561, p<.001). However, only beliefs associated with narcissism were found to significantly improve the prediction capabilities of the model over the constant-only model. Such beliefs improved prediction of membership of the ASPD group by a factor of 2.

Table 4: The Influence of Narcissism scale on prediction of ASPD

B	*SE*	*Wald*	*Df*	*Sig*	*Exp(B)*
.693	.281	6.086	1	.014	2.00

Between Groups Analyses

Personality Disorder and Self-injury

The following section compares the ISI and control groups on a number of variables. In order to properly assess the relationship between personality disorder and intentional self-injury, the influence of two key variables (depression and social desirability) was first assessed, as it was hypothesised that these may play an important role in the way in which participants reported their experiences. For example, it is important to know the relationship between being a self-harmer and the propensity to give socially desirable responses, as this may artificially deflate reporting of self-harming behaviour. Likewise, it is important to understand the role played by depression, as it may be the case that self-harm is related to low mood rather than to the presence of borderline characteristics. Finally, it may also be the case that the legal situation of a prisoner may affect their tendency to self-injure. Individuals in prison occupy a number of legal categories, including those on remand, those who have been convicted but remain unsentenced and those who have been sentenced and are serving out their time. These differences in status may influence the tendency to self injure.

Social desirability Scores, Depression and Legal Status of both Groups (ISI Group and Control group)

An independent samples t-test was used to investigate whether the self-injury and control groups differed on a measure of social desirability (the Marlowe Crowne social desirability scale, 1960). As shown in Table 5 below, the two groups did not differ significantly on this measure. Further, the scores obtained by each group are close to the mean obtained by the normative sample for this measure (13.72, sd =5.78 for male college students), indicating the absence of a clear distorting tendency by either group. In addition, the intentional self-injury group showed significantly higher levels of depression than the control group (see Table 5,. below). The relationship between legal status and ISI was investigated by cross-tabulating the numbers of people in each group. This is summarised below in Table 5.1

Table 5: Social Desirability and Depression: A Comparison of ISI and Control Groups

	Mean (sd) ISI group	*Mean (sd) control group*	*t*	*df*	*p*
SDS score	13.04 (6.1)	14.13 (6.3)	-0.06	56	0.511 (ns)
BDI score	26.35 (4.5)	13.3 (2.3)	4.4	58	.001

Table 5.1: The relationship between ISI and legal status

	ISI Group	*Controls*
Remand	17	7
Convicted (unsentenced)	8	2
Sentenced	15	24

Table 5.1 shows that those who intentionally self harm (ISI group) are over-represented in the remand and convicted (unsentenced) groups, but under-represented in the sentenced group.

Given the apparent significance of both levels of depression and legal status on the tendency to self injure, these will be considered as covariates in some of the subsequent analyses. To facilitate such analyses, the two unsentenced categories (i.e. convicted but unsentenced, and unconvicted) were collapsed to create a dichotomised variable Legal Status variable (i.e. unsentenced versus sentenced). This was acceptable as chi square analysis found there to be no differences between these two levels of the Legal Status variable in terms of group membership ($X^2_{(1)} = .581$, $p = .462$ (ns)).

Hypothesis 1: Diagnosis of BPD between Self-Injury Group and Control Group

It was hypothesised that the ISI group would demonstrate higher levels of BPD than the control group. This was assessed using a chi-Square analysis. As can be seen in Table 6 below, this hypothesis was supported ($X^2_{(1)} = 8.17$, $p = 0.004$), with 45% of the ISI group receiving this diagnosis compared to 13% of controls.

Table 6: Chi-square comparisons of BPD Diagnosis

Dependent Variable	*ISI Group*	*Control Group*	X^2	*df*	*p*
BPD Diagnosis	N=17 (45%)	N=4 (13%)	8.172	1	.004

Due to the possible influence of the level of depression and Legal Status, which were identified in previous analyses as possible covariates, an analysis of covariance (ANCOVA) was conducted to assess the effect of these variables on number of BPD criteria met. Analyses revealed that neither exerted a significant

influence and the main effect of Group remained significant (see Table 6.1, below).

Table 6.1: ANCOVA: The Effect of Group on Number of BPD Diagnostic Criteria Met (Controlling for Depression and Legal Status)

Main Effect	df	F	p
Status	1	.558	.458
Depression (BDI)	1	.000	.984
Group	1	10.304	.002
Error	59		

Hypothesis 2: Diagnosis of BPD Between Groups following removal of Self-destructive/Suicidal Behaviour Criterion

It was hypothesised that the ISI group members would remain differentiable from controls after removal of the suicidal/self-destructive behaviour criterion of BPD diagnosis. This was tested using Chi-square analysis. Table 7 shows that taking this criterion out of the analysis reduced the proportion in the ISI group who still met sufficient criteria for a diagnosis of BPD to 26% (a 41% reduction). Rates of BPD in the control group remained unchanged at 13%, reflecting the fact that none of these individuals met the criterion. As a result of the narrowing of the original discrepancy in rates of diagnosis after removing the criterion, the two groups were no longer different statistically in relation to rates of BPD diagnosis ($X^2_{(1)} = 1.90$, p = ns).

Table 7: Chi-square comparisons of BPD Diagnosis Following Removal of Self-Destructive Behaviour Criterion

Dependent Variable	*ISI Group*	*Control Group*	X^2	*df*	*p*
BPD Diagnosis after criterion removal	N=10 (26%)	N=4 (13%)	1.899	1	.140

Given that the two groups no longer differ in terms of diagnosis once the suicidal/self-destructive behaviour criterion is removed, a dimensionally orientated analysis was carried out to determine if the groups showed differences. Specifically, the groups were compared in terms of mean number of BPD criteria met by each group following the removal of the suicidal/self-destructive behaviour criterion. An independent samples t-test indicated that the ISI group met significantly more diagnostic criteria than the control group ($t_{(66)} = 2.71$, $p = 0.008$). This is summarised in Table 8, below.

Table 8: Group Comparison of Mean Number of BPD Criteria Met Following Removal of Self-Destructive Behaviour Criterion

Dependent Variable	*ISI Group*		*Control Group*		*t*	*df*	*p*
BPD Criteria	N=38	3.5263 (2.089)	N=30	2.1667 (2.001)	2.714	66	.008

Hypothesis 3: Differences in ASPD Diagnosis between Self-injurers and Control Group

It was hypothesised that the ISI group would not differ from controls in terms of the rates of ASPD diagnosis and mean number of diagnostic criteria met. This was investigated using chi-square analysis. The ISI group showed a slightly higher proportion of the disorder than the control group - 62.5% vs. 57.6% - though chi-square analysis showed that this was not statistically significant ($X^2_{(1)} = .19$, $p = .910$, ns). This is summarised below, in Table 9.

Table 9: Chi-square Comparisons of ASPD Diagnosis between ISI group and control group

Dependent Variable	*ISI Group*	*Control Group*	X^2	*df*	*p*
ASPD Diagnosis	N=25 (63%)	N=19 (58%)	.189	1	.910

A dimensional approach to ASPD was then taken, focusing on the question of whether the two groups differed on the number of criteria met for the diagnosis of ASPD. An independent samples t-test identified no differences between the groups in terms of total number of criteria met ($t_{(66)} = -.25$, $p = 0.539$), with each group meeting a mean number of just over four ASPD criteria.

Hypothesis 4: Comparison of ISI and Control Groups in terms of Dysfunctional Beliefs

It was hypothesised that the ISI group would endorse higher levels of dysfunctional beliefs than controls. This prediction was tested by comparing the two groups' scores on the Personality Belief Questionnaire (PBQ; Beck et al. 2001). An independent samples t-test supported the hypothesis, with the ISI group obtaining significantly higher mean scores on the whole questionnaire ($t_{(57)} = 2.86$), $p=0.006$). This is summarised in table 10, below.

Table 10: Group Comparison of PBQ Mean Totals

Dependent Variable	*Mean (SD) ISI Group*		*Mean Control Group*	*(SD)*	*t*	*df*	*p*
PBQ Total	N=30	231.9667 (67.25)	N=29	178.7586 (75.383)	2.863	57	.006

Having found that higher scores on the PBQ characterised the ISI group, it was important to investigate the possible influence of the two covariates, depression and legal status. An analysis of covariance (ANCOVA) was therefore carried out. As can be seen in Table 10.1 (below), the main effect of Group remained significant even when the two covariates were controlled for: that is, the higher scores on the PBQ obtained by the ISI group were not attributable to group differences in depression or legal status.

Table 10.1: ANCOVA: The Effect of Group on Total Score on the Personality Belief Questionnaire (Controlling for Depression and Legal Status)

Main Effect	df	F	p
Status	1	1.063	.307
Depression (BDI)	1	.857	.359
Group	1	4.997	.030
Error	52		

In view of the ISI group's relatively elevated total scores on the PBQ, a finer analysis was undertaken investigating possible group differences on the 10 scales of the measure. Given that multiple analyses were to be used, it was appropriate to make an adjustment for Type 1 error by dividing the usual significance level of .05 by the number of 10 (as 10 tests were carried out). A one-way analysis of variance (ANOVA) found that the ISI group scored significantly higher on the avoidant, dependent, and borderline belief scales. Table 11 displays means obtained by each group on all scales of the PBQ.

Table 11: Scores on PBQ obtained by ISI and Control Groups

PBQ Beliefs scale	*Mean for self-injury group (SD)*	*Mean for control group (SD)*	*F*	*p*
Avoidant	28.79 (9.67)	17.19 (9.61)	23.103	0.000*
Borderline	24.97 (9.16)	16.76 (9.16)	11.675	0.001*
Dependent	24.61 (8.87)	17.60 (10.04)	8.647	0.005*
Histrionic	21.75 (10.63)	14.42 (9.53)	8.280	0.006
Schizoid	27.28 (8.14)	21.12 (9.12)	7.780	0.007
Narcissistic	17.52 (12.02)	10.55 (8.73)	6.963	0.011
Paranoid	29.22 (12.05)	21.63 (12.78)	5.782	0.019
Passive-Aggressive	32.71 (9.09)	26.61 (12.52)	4.815	0.032
Obsessive-compulsive	28.97(10.92)	26.39 (12.08)	0.807	0.373
Antisocial	20.41 (10.12)	18.12 (10.71)	0.753	0.389

*p<.005

Having found three significantly higher means for the ISI group - relating to avoidant, borderline, and dependent beliefs - it was necessary to control for the covariates legal status and depression. ANCOVAS were therefore carried out for the three belief scales. As can be seen in Tables 11.1 and 11.2, avoidant and borderline beliefs remain significantly higher even after controlling for the two covariates. However, the dependent belief scale was no longer significantly higher for the ISI group (Table 11.3).

Table 11.1: ANCOVA: The Effect of Group on Endorsement of Avoidant Beliefs (Controlling for Depression and Legal Status)

Main Effect	df	F	P
Status	1	2.401	.127
Depression (BDI)	1	.541	.465
Group	1	14.362	.000
Error	56		

Table 11.2: ANCOVA: The Effect of Group on Endorsement of Borderline Beliefs (Controlling for Depression and Legal Status)

Main Effect	df	F	p
Status	1	.936	.337
Depression (BDI)	1	1.088	.301
Group	1	9.835	.003
Error	56		

Table 11.3: ANCOVA: The Effect of Group on Endorsement of Dependent Beliefs (Controlling for Depression and Legal Status)

Main Effect	df	F	p
Status	1	3.809	.056
Depression (BDI)	1	3.286	.075
Group	1	1.391	.243
Error	56		

Prediction of Self-Injury Group Membership

Given the significant group differences after controlling for Type 1 error and covariates, the two significantly different scale means (i.e. those relating to avoidant and borderline beliefs) were entered into a binary logistic regression to determine whether either of these could predict membership of the ISI group. Analysis revealed that although the overall model was significant ($X^2_{(6)}= 17.66$, p=.007), neither of the individual scales independently added to the prediction of ISI over the constant-only model.

CHAPTER FOUR: DISCUSSION

Summary of Main Findings

- The PBQ showed good internal consistency and broadly replicated findings from the validation study of the measure by Beck et al. (2001). Individuals with ASPD and BPD scored more highly on the PBQ measure overall than individuals with neither diagnosis.
- Antisocial personality disorder (ASPD) was the more common diagnosis, with almost two thirds (65.2%) of the sample meeting criteria for the disorder. Borderline personality disorder (BPD) was less commonly diagnosed, though still characterised almost a third (30.4%) of those interviewed.
- ISI prisoners had higher rates of BPD than controls.
- BPD diagnosis no longer differentiated between ISI and control groups when the self-harm criterion was removed, but the former group continued to meet more criteria for the diagnosis following its removal.
- The two groups (ISI and control) did not differ significantly in terms of ASPD diagnosis.
- Avoidant and borderline beliefs were more strongly endorsed by the ISI group than controls.

The Psychometric Properties of the Personality Belief Questionnaire (PBQ)

Analyses were carried out on the whole sample to determine the psychometric properties of the PBQ.

Internal Consistency and Inter-correlations

The PBQ achieved high internal consistency overall. At a finer level, acceptable inter-correlations between the nine individual scales of the measure were evident and all scales were positively correlated. The weakest inter-correlation was between the schizoid and the dependent beliefs scale, and the strongest

between the avoidant and dependent beliefs scale. These findings replicate the findings of Beck et al.'s original (2001) validation study of the PBQ, including the finding that all scales were positively inter-correlated. Although one might expect this to be due to the fact that Axis-II disorders tend to co-occur, it may also indicate a lack a specificity on the part of the measure. For example, one might expect dependent and schizoid beliefs to be negatively correlated, given that they reflect theoretically opposing personality profiles. It may therefore be the case that the PBQ is picking up evidence of general personality pathology rather than *specific* forms of personality disturbance.

Personality Disorder and Dysfunctional Beliefs

Individuals with both personality disorder diagnoses (i.e. antisocial and borderline types) reported higher levels of dysfunctional beliefs than individuals with neither diagnosis. Further, while not statistically significant, there were trends for individuals with one personality disorder diagnosis to endorse more dysfunctional beliefs than individuals with neither, and also for individuals with two diagnoses to report more dysfunctional beliefs than those with only one. All scales of the PBQ were examined in terms of their ability to predict ASPD and BPD diagnoses. Although no individual scale was able to predict BPD diagnosis, the narcissism scale predicted ASPD diagnosis.

Overall Rates of Personality Disorder

One aim of the study was to determine the levels of BPD and ASPD in a prison population. Overall, high rates of personality disorder were evident, with two thirds of the sample (66.67%) receiving one or more such diagnosis. Antisocial personality disorder (ASPD) was the more common diagnosis, with almost two thirds (65.2%) of the sample meeting criteria for the disorder. The high rates of ASPD for the prison sample as a whole are broadly comparable to findings from previous research (Singleton et al., 1998), and are likely to reflect, in part, the heavy reliance on criteria closely associated with law breaking and an unstable lifestyle to arrive at a diagnosis. As noted earlier, a number of authors have questioned the utility of the ASPD diagnosis (e.g. Millon & Davis,1996), and

Widiger and Corbitt (1997) comment on the lack of specificity of the diagnostic criteria in prison populations.

Borderline personality disorder (BPD) was less commonly diagnosed, though still characterised almost a third (30.4%) of those interviewed. Higher rates of this particular disorder were found than have been reported in previous studies (e.g. Singleton et al., 1998), but this finding is unsurprising given that the prevalence of BPD is inflated here by the presence of a self-injuring group, who showed far higher rates of this disorder than the control group (see below).

ASPD and BPD were found to be highly co-morbid in this sample, with almost a third of all individuals interviewed receiving both diagnoses. While no studies to date have looked at co-morbidity between specific personality disorders in prison settings, significant overlap between these two disorders is perhaps unremarkable given their frequent co-occurrence in non prison samples. For example, Oldham et al's (1992) study found that all eight of a sample of ASPD diagnosed inpatients also met the criteria for BPD. Another study by Brooner et al. (1993), which included a larger proportion of individuals with ASPD (n= 46), found that 20% of outpatients diagnosed with ASPD also met BPD criteria. Both of these studies used the SCID-II as the basis for their diagnoses. Other studies involving inpatients show that individuals with ASPD who were also diagnosed with BPD, range from 56% (Corbitt, 1993) to 71% (Millon and Tringone, 1989), though it is important to note that each of these used a different measure to assess personality disorder. Some of the overlap between ASPD and BPD found here and in previous studies is likely to represent a diagnostic artifact, reflecting mutually shared criteria (e.g. both personality disorders include items relating to under-controlled anger).

Relationship Between Borderline Personality Disorder and ISI

The prediction that the ISI group would receive more BPD diagnoses than the control group was supported, with 44% of the ISI group receiving this diagnosis compared with 12.9% for the control group. Further, the results indicated that

this was not accounted for by higher levels of depression in the ISI group, or the over-representation of unconvicted/unsentenced prisoners in this group.

While more self-injurers met full criteria for BPD than members of the control group, 'self-destructive behaviour' is one of the diagnostic criteria for BPD, and removal of this criterion from the analyses substantially reduced the proportion of self-injurers diagnosable with BPD. As a consequence, differences between the groups in terms of BPD diagnoses were no longer statistically significant. However, analysis of the data in a dimensional manner revealed that the self-injurers still differed from control prisoners in terms of mean number of BPD diagnostic criteria met after this particular criterion was removed, lending support for the notion that ISI may often be understandable as a manifestation of wider personality and behavioural pathology.

As noted earlier, the relatively high rates of BPD in the sample overall reflect the contribution of the self-injury group, who showed particularly high prevalence of the disorder. It had been predicted that higher rates of the disorder would be found amongst self-injurers. BPD is widely recognised to be a severe and disabling disorder associated with profound difficulties in the individual's functioning, and the presence of the disorder may help explain a number of previously identified correlates of ISI, as discussed earlier. For example, previous findings that self-injury in prisons is associated with victimisation in the form of bullying may be understandable in the context of the borderline individual's difficulties in self-assertion and pronounced interpersonal sensitivity. Similarly, previously identified associations between ISI and anger (e.g. Toch, 1975) may also be understandable in such a context in that, as noted earlier, borderline individuals are frequently prone to experience intense bouts of this particular emotion, coupled with difficulties in its regulation.

On the basis of the current findings then, it seems that BPD is among the constellation of long-term personality factors that predispose an individual to difficulties in managing the demands of the prison environment. As noted earlier, BPD is characterised by many difficulties in terms of behaviour, affect, and cognition. When an individual with these difficulties is exposed to a prison

environment, they are less able to cope than many of their peers, and become vulnerable to intentional self-harm.

Rates of Antisocial Personality Disorder Diagnosis

As hypothesised, the two groups did not differ significantly in terms of ASPD diagnosis, though the diagnosis was marginally more commonly diagnosed in the ISI group than the control group (62.5 vs. 57.5%). The groups did not differ in terms of the mean number of diagnostic criteria either, indicating that self-injurers are no more antisocial than non self-injuring prisoners (as determined using DSM-IV criteria).

The current findings indicate that while a high proportion of self-injurers were diagnosed with ASPD, they were not differentially antisocial in this prison context. As considered earlier, ASPD and self-injury have often been seen as linked, but this is not reflected in these data. On this basis it seems that ASPD per se cannot account for self-injury.

Previous observations of elevated levels of antisocial behaviour on the part of self-injurers in institutional settings (e.g.Lester, 1991) appear then not to reflect ASPD itself. On the basis of findings in relation to BPD and the ISI group, as reported above, it seems that the observations in the literature that self-injurers exhibit more antisocial acts may be a product of borderline personality pathology, rather than because of elevated antisocial traits.

Relationship between ISI and Dysfunctional Beliefs

As predicted, members of the self-injury group reported higher levels of dysfunctional beliefs on the PBQ measure overall. Further, the ISI group also achieved higher mean scores on all the individual scales of the PBQ, though only those relating to avoidant, borderline, and dependent beliefs were significantly higher. After correcting for depression and legal status (i.e. by considering them as covariates), dependent beliefs were found no longer

significant, meaning that only the avoidant and borderline scales differentiated the two groups.

Mean scores obtained by the ISI group on both these particular scales were comparable to scores obtained by individuals with a confirmed diagnosis of the corresponding disorder in two previous studies. Beck et al. (2001), for example, found a mean score of 25.58 (sd 9.51) on the avoidant beliefs scale of the PBQ for individuals who met full DSM-IV criteria for avoidant personality disorder, and the ISI group studied here achieved a mean score on this particular scale of 28.79 (sd 9.67). Further, in their study investigating borderline beliefs, Brown et al. (2000) found a mean on the borderline beliefs scale of 25.70 (sd 9.83) for individuals with diagnosed with BPD, which is comparable to the mean of 24.7 (sd 9.16) obtained by self-injurers in the current study.

From a cognitive point of view, dysfunctional beliefs are considered to underpin personality disturbance. The associations noted in this study between PBQ scores and the number of PD diagnoses achieved by individuals in the whole sample lends some support to this notion: if the cognitive theory of personality disorders is valid, one would expect higher levels of dysfunctional beliefs to be positively associated with increasing personality disturbance, as indexed by increasing number of diagnoses.

Regarding comparisons between the two groups, the finding here that borderline and avoidant personality beliefs are particularly significant in describing the ISI cohort requires some interpretation. In particular, it may be helpful to consider the relevance of these beliefs to the conceptualisation of self-injury as a means of coping, and to interpret some previously identified correlates of self-injury in light of these.

As stated earlier, significant difficulties in regulating affect are considered to be characteristic features of both BPD and ISI. One of the items contributing to both the avoidant and borderline scales - 'Unpleasant feelings will escalate and get out of control' – is amongst others that reflect self-perceived difficulties in managing negative emotions. The preferential endorsement of such items points

to an underlying cognitive mechanism in ISI: an individual's self-appraised inability to cope may help explain their recourse to self-injury as a form of coping.

Another scale item, also common to the avoidant and borderline scales, is: 'If people get close to me, they will discover the real me and reject me'. This suggests significant shame about the self. As such, a belief of this kind may make it difficult for the individual to share their problems with others, and may possibly contribute to avoidant styles of coping. As mentioned earlier, avoidant coping appears, from other research, to characterise self-injurers (e.g. Haines and Williams, 1997). Such a means of coping is all the more likely to be implemented in the presence of other beliefs from the borderline scale such as 'Others cannot be trusted', which indicates a basic mistrust of others' intentions. In addition, items on the borderline scale point specifically to beliefs about difficulties in coping with problems in general. For example, the belief 'I can't cope as other people can' may plausibly underpin some of the problem-solving difficulties that have previously been identified in this population (e.g Dear et al., 2001).

A few further points can be made in relation to individual scale items that are *not* shared across the borderline and avoidant beliefs scales. Regarding the former kind of beliefs, a hallmark of the borderline personality is strong dependency needs. Such needs are reflected in reflected in PBQ beliefs such as, 'I need somebody around available at all times to help me carry out what I need to do or in case something bad happens'. The fact that self-injurers more strongly endorsed beliefs of this kind help explain the difficulties they have in coping with isolation from others (Ross et al. 1978), and also their apparent hypersensitivity to losses of interpersonal support (Haycock, 1989).

In addition, avoidant personality disorder is commonly associated with under-assertiveness (Beck and Freeman, 1990), and the finding here that avoidant beliefs are strongly endorsed by self-injurers may help explain why a recent history of being the victim of bullying has been found to related to ISI (Liebling and Krarup, 1993). Individuals who have difficulties asserting themselves may

not only be relatively susceptible to bullying in the first place, but may also be less able to extricate themselves from such victimisation. This should also be considered in the context of difficulties managing intense affect, coupled with underlying dependency needs, which are also common features of this disorder (Beck and Freeman, 1990).

Finally, it is important to note that the beliefs comprising the borderline scale are frequently mutually conflictual. For example, beliefs about the need to rely on others whilst at the same time holding beliefs about others' basic untrustworthiness is likely to precipitate feelings of conflict. From a cognitive point of view, such internally contradictory beliefs are at the heart of borderline psychopathology, and their observed presence here amongst self-injurers supports findings that borderline features separate such individuals from controls.

Limitations

Generalisability

There are some methodological weaknesses in the current study worthy of brief discussion. Firstly, the relatively small sample size requires that caution be used in broadening the findings of this study to those of the wider prison population. Secondly, there remains the possibility that the participants who took part in the study represent a sampling bias, by virtue of the fact that those who are less likely to participate may be less interpersonally cooperative, and therefore more guarded. These may, in turn, be those with higher levels of pathology. It is noteworthy, however, that only a small number of people refused to participate in the study. Finally, the relative absence of Axis I measures (other than for depression) may in turn mask the true level and nature of psychopathology in this population, and influence reporting on other measures.

Measurement Issues

A clear limitation relates to the partial assessment of Axis I difficulties, as only a measure of depression was used here. Consistent with findings reported elsewhere (e.g. Livingston, 1997), depression was found to be elevated amongst self-injurers compared to controls, and the presence of depressive symptoms appeared to account for some noted differences between the two groups. For example, dependent personality beliefs no longer discriminated the self-injury group from controls when depression was taken into account. This finding concurs with prior evidence that mood influences self-reported beliefs on other measures (Miranda, 1990). On this basis it seems plausible that other emotional state factors may have been associated with ISI and played a mediating role in some of the associations identified here. In particular, anxiety has previously been implicated in instances of ISI (Bennun, 1984; Winchel and Stanley, 1991), and an assessment of the contribution of anxious symptoms to self-injury would have been desirable. As with depression, if higher levels of anxiety were found amongst self-injurers it would have been possible to partial out the effects of this disorder to determine whether differences between groups remained significant. Plausibly, again as with depression, significant state anxiety could have differentially influenced responses on some measures. For example, on the PBQ the ISI group were found to endorse more avoidant beliefs than controls. When some of the individual items comprising the scale are examined, such as 'I cannot tolerate unpleasant feelings', it can be seen that these could plausibly reflect state anxiety rather than being indicative of longstanding personality traits. It would, therefore, have been useful to include a specific measure of anxiety, such as the Beck Anxiety Inventory (Beck, 1988). Alternatively, the inclusion of broad-ranging screening measure such as the Symptom Checklist-90-R (SCL-90-R; Derogatis and Cleary, 1977) would have allowed an assessment of the impact of a wider range of emotional states, including anxiety. Similarly, the inclusion of an individual measure of anger, such as the State-Trait Anger Expression Inventory (Spielberger, 1988), would have further enhanced the study, in light of previous findings of anger difficulties amongst self-injurers (e.g. Toch, 1975: Snow, 1997).

In addition, given that previous studies have found both isolation (Ross et al. 1978) and bullying (Power and Spencer, 1987) to be associated with ISI, an assessment of whether the two groups differed on these two variables would have enhanced the current study. If this were the case it would be possible to determine whether factors identified in the current study continue to exert an effect independently of these. In addition, it would be possible to establish whether prisoners endorsed particular beliefs as a result of their recent experiences (e.g. avoidant beliefs relating to expectations of others as critical or punishing).

In addition to the limited assessment of Axis I problems, the fact that only two personality disorder diagnoses were examined constitutes a weakness of the current study. A full assessment of all DSM-IV Axis II diagnoses would have allowed an evaluation of the significance of other personality disorders in cases of ISI. Given the tendency of self-injurers to endorse avoidant beliefs, it is possible that such individuals would also meet criteria for avoidant personality disorder. In addition, an assessment of a wider range of personality disorder diagnoses would have allowed for a more thorough evaluation of the relationships between diagnoses and beliefs, in a way similar to that carried out by Beck and colleagues in their validation of the PBQ (Beck at al, 2001).

A further limitation of the study relates to the uncertain reliability of the diagnoses assigned (i.e. BPD and ASPD). While strong efforts were made to maximise reliability *between* researchers, it is not clear to what extent these diagnoses would remain stable over time. As noted in the Methods section, test-retest reliability for personality disorder diagnoses is generally poor, though this is not a problem unique to the SCID-II measure. This limitation is all the more significant in view of the fact that Axis I problems were only partially assessed here, given that such state phenomena may influence how individuals respond to questions comprising the SCID-II. The same criticism applies to the lack of such data on the PBQ (which is assumed to reflect longstanding beliefs), as test-rest correlations for the measure were only been determined for a very small sample of outpatients in Beck et al's (2001) study. A future longitudinal follow up study of self-injurers in prison would determine whether or not such diagnoses

genuinely reflect features of individuals' long-term functioning. Furthermore, an analysis of the split-half reliability of the PBQ's scales, in addition to the reliability estimates reported here, would allow a more comprehensive assessment of the psychometric properties of the questionnaire's scales.

While an assessment of social desirability revealed no differences between groups, and the general experience of the author in working with the participants in this study was that they were cooperative and open throughout the interview process, there may have been more subtle influences on the kinds of report provided to an external researcher. Although it was clearly stated that the choice of the prisoner to involve himself in the research would in no way influence the conditions of his sentence, it is conceivable that the prisoners would have felt participation would convey a sense of cooperation and willingness to the authorities. Although such an effect would be very hard to counteract entirely, it may have been useful to gain the views of others who knew the prisoner, such as a prison officer or a member of their family, in order to 'corroborate' the information.

Further, the concept of 'schema avoidance' may also have had an influence on the type of data that were collected. For example, some of the prisoners may not have been able to recognise some of their own problematic beliefs due to what Young (1994), in his schema theory, refers to as 'active schema avoidance'. In such cases, prisoners would not be able to accurately describe their experiences due to the concurrent activation of a problematic schema, which in turn prevents reliable introspection into their difficulties. The most obvious implication of this is that there would be a significant degree of under-reporting of personality problems.

The overlap between the same items on the PBQ and several different personality disorders may well indicate a problem with the specificity of the measure, particularly as previous studies have produced similar results (e.g. Trull et al., 1993). Clues to this may derive from the finding that all of the correlations between the personality disorders are positive, and in some cases unexpected (e.g. dependent and schizoid). This may therefore indicate that the

PBQ is more appropriate as a measure of general personality pathology, rather than a tool for identifying the presence of 'pure' forms of a particular personality disorder.

Clinical Implications of Findings

Considering first the whole sample, the findings of the current study highlight the existence of a considerable level of psychopathology in a prison sample. This in turn has implications for the role of psychological services in providing assessment, diagnosis, and treatment to a large number of people, as well as for the provision of education and training to those involved in their direct care and rehabilitation. However, as well having implications for the way in which this population is managed and cared for, it also raises important questions about the role and likelihood of rehabilitation for people in prisons. It seems unlikely, for example, that proper and effective rehabilitation can take place if the contribution of Axis II disorders is not fully, or even partially, considered. Further, it is widely held that that people with personality disorders are extremely difficult to treat. If the concept of treatability is extended to include the notion of rehabilitation (of criminal behaviour), it seems plausible to argue that the presence of personality disorders may seriously undermine the likelihood of successful offender rehabilitation.

This has implications for the proposed 'dangerous and severe personality disorder' (DSPD) bill (Home Office/ Department of Health, 1999). Whilst it is no doubt important and appropriate to in some way regulate the behaviour of those at risk of committing serious and dangerous crimes, arguably research such as that reported here suggests that the scale of the problem is wider than many people would care to think. The finding that remand and unsentenced prisoners show high levels of clinical depression may also have a number of implications for this bill. Plausibly, people with personality disorders find it particularly difficult to cope with uncertainty, especially when skills such as emotional regulation are considered. Long periods of uncertainty regarding their legal status, especially if they are being closely monitored for the purposes of the DSPD bill, may pose particular difficulties.

Turning to consider findings specifically in relation to the self-injury group, a number of points can be made. While the findings here that borderline personality pathology is prevalent amongst self-injurers may engender therapeutic pessimism, as highlighted earlier there is a growing body of evidence indicating that symptoms of this disorder can be effectively ameliorated using particular treatment approaches (e.g. Linehan, 1994; Bateman and Fonagy, 2001). Given the nature and severity of BPD, however, confirmation of the presence of such pathology amongst does self-injurers does imply that straightforward techniques solely focused on symptom relief are unlikely to be sufficient to reduce ISI, at least in the longer term. Rather, findings here appear to support the need to develop specialist prison treatment programmes to address individuals' broad ranging difficulties. Further, given that the constellation of difficulties associated with BPD are considered to be relatively stable over time, it seems likely that the development of such interventions would need to be complemented by and linked to community programmes if such problems are to be definitively addressed. Considering further the feasibility of undertaking therapeutic work with self-injuring prisoners, a number of additional observations support a degree of cautious optimism in this respect. Firstly, many of those with personality disorders who took part in the research demonstrated the ability to access and acknowledge some of their dysfunctional beliefs. This suggests a potentially positive prognosis for cognitively-based interventions with a prison population, and highlights that the PBQ may be a relevant and valuable measure in a clinical context, even if it is beyond the scope of this study to infer that it can predict specific personality disorders (although Beck et al.'s 2001 study suggested it was possible to do so for five of the DSM-IV personality disorder diagnoses).

On a more interpersonal level, the author's experience of carrying out research with prisoners supports a rather optimistic view and expectation of working with this population, who are often viewed in a negative light by clinicians. Negative perceptions are often perpetuated in the media, and there may be a role for clinical psychologists to play in addressing the widespread disdain that is held

for working both with prisoners and with people with personality disorders in general.

It is important to acknowledge, however, that the research process used in this study was not intrinsically challenging to prisoners, as would be the case with therapeutic work. Notwithstanding this, though, it was generally relatively easy to establish a useful rapport with the participants of this study, and engage them in a process that involved a degree of introspection.

Lastly, this study represents a quantitative snap shot of these individuals at a particular time. In the case of those with BPD, this may be particularly problematic, as such people are known to shift in and out of more prototypical borderline presentations rapidly. It may well be the case that a follow up study, using a more qualitative approach would be equally informative. This approach could be used to examine the experiences of prisoners over a longer period of time, with a particular focus on their perceptions of their emotional and behavioural responses to their environments. The willingness of individuals to talk openly about their experiences suggests that this would be a feasible endeavour. A qualitative study looking at staff attitudes towards self-injury and receptiveness to psychological accounts of individuals problems would also be instructive, as this may itself begin to lay some of the groundwork required for the development of further treatment possibilities for this population.

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APPENDIX 1

Letter of Ethical Approval

University College London Hospitals NHS

NHS Trust

The Joint UCL/UCLH Committees on the Ethics of Human Research: Committee Alpha

Chairman:
Professor André McLean

Please address all correspondence to:
Iwona Nowicka
Research & Development Directorate
UCLH NHS Trust
1st floor, Vezey Strong Wing
112 Hampstead Road, LONDON NW1 2LT
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Dr J Feigenbaum
Lecturer
Sub-Department of Clinical Health Psychology
UCL
Gower Street

10 June 2002

Dear Dr Fegenbaum

Study No: **01/0064** *(Please quote in any correspondence)*
Title: **Self harm in male prisoners: the role of psychological factors**

I am writing to confirm that the above was approved by the Joint UCL/UCLH Committees on the Ethics of Human Research: Committee Alpha on April 6th, 2001.

Please note that it is important that you notify the Committee of any adverse events or changes (name of investigator etc) relating to this project. You should also notify the Committee on completion of the project, or indeed if the project is abandoned. **Please remember to quote the above number in any correspondence.**

Yours sincerely

I. Nowicka

Iwona Nowicka
Administrator, UCL/UCLH Ethics Review Committees

APPENDIX 2

Information Sheet

Sub-Department of Clinical Health Psychology

UNIVERSITY COLLEGE LONDON

GOWER STREET LONDON WC1E 6BT

Dr Janet Feigenbaum: 0207 679 5964

Dr Robert Halsey: 0207 679 1907

A STUDY OF BEHAVIOUR IN PRISON
CONFIDENTIAL INFORMATION SHEET

Introduction

We are psychologists conducting some research as part of a training programme at University College London. We are asking lots of people to be involved in this study and you were suggested to us as a possible participant. It is entirely up to you whether you would like to be involved and this information is to help you decide.

Ethics

All proposals for research with human participants are reviewed by an ethics committee before they can go ahead. This proposal was reviewed by the University College London ethics committee.

What the study is about

The study focuses on understanding intentional self-injury in prison. By intentional self-injury we mean when somebody injures themselves on purpose, for example, by biting, cutting, or burning themselves. In particular, we are interested in the kinds of experiences, feelings and views that might be related to intentional self-injury. In this study we will be interviewing many people, some of these people will have self-injured and others will not. We will then look to see if there are any differences in the experiences, feelings, and views of those who have self-injured and those who have not. This may then help us to understand self-injury better.

What the study involves

As a part of this study we will ask you some questions about your experiences, how you tend to view situations, and how you tend to deal with things. We will also ask you to fill out some detailed questionnaires and we will give you as much help with this as you would like. You will not have to answer anything you don't want to. In order to do this, we would need to meet with you for 2 hours in the morning and 2 hours in the afternoon. You would have a break of about 2 hours in between for lunch and we will provide refreshments during our meeting.

If you need support after the study

If you feel upset or troubled after taking part in this study then there are a number of people you can contact for support:

1) Listeners, a Samaritan helpline run by trained volunteers who are also inmates.
2) The officers on your wing
3) The psychology service, by making an appointment with your doctor and asking for a referral to psychology.

Confidentiality

All the information that we collect would remain entirely confidential and your name would not be attached to any of the questionnaires or interview forms that we complete. It is important to remember that we are interested in differences between groups of people and not any individual's particular responses. Prison Officers on your wing will be aware that you are participating in the study but will not be informed about what is discussed in our meeting. The only time we will have to **break confidentiality** is if you volunteer information relating to definite plans to cause serious physical injury to yourself, definite plans to cause physical injury to another person, or information relating to a possible breach of prison security. If this were to happen, we would have no choice but to disclose this information to prison staff.

Pulling out of the study

If you agree to join the study, you will be free to pull out whenever you like and you will not have to explain why. If you decide not to take part, this will **not** in any way affect your stay in prison.

Questions

There will now be an opportunity for you to ask any questions that you may have about the study. Then, if you agree to take part in the study, please feel free to ask questions at any point.

Dr Janet Feigenbaum, Clinical Psychologist, University College London

Luke Endersby, Trainee Clinical Psychologist, University College London

Lynda Todd, Trainee Clinical Psychologist, University College London

Dr Robert Halsey, Clinical Psychologist, University College London

APPENDIX 3

Consent Form

Sub-Department of Clinical Health Psychology

UNIVERSITY COLLEGE LONDON

GOWER STREET LONDON WC1E 6BT

Dr Janet Feigenbaum: 0207 679 5964

Dr Robert Halsey: 0207 679 1907

CONFIDENTIAL CONSENT FORM

I have received the information sheet provided for this research.	YES / NO
I have read the information sheet provided.	YES / NO
I have had the opportunity to ask questions about the information provided.	YES / NO
I received satisfactory answers to all my questions	YES / NO
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and that this will not affect my stay in prison	YES / NO
I understand that Prison Officers on my wing will be alerted to my participation in this research but that the content of my answers will not be provided	YES / NO
I agree to take part in the above study.	YES / NO

_____

[BLOCK CAPITAL LETTERS]
(Name of Client)

_____ _____

(Signature of Client) (Date)

_____

[BLOCK CAPITAL LETTERS]
(Name of Person taking Consent)

_____ _____

(Signature of Person taking Consent) (Date)

APPENDIX 4

Demographic Interview Questions

DEMOGRAPHIC QUESTIONS

1. How old are you?

2. How would you describe your ethnic origin?

A	Afro-Caribbean
B	Asian
C	White UK
D	Other non-white
E	Other white

3. Are you a) on remand
   b) convicted but not sentenced (JR)
   c) sentenced

4. What was your offence(s) / alleged offence(s)?

5. What qualifications have you obtained?

   a) No formal qualifications
   b) CSEs
   c) O levels / GCSEs
   d) A level
   e) BTEC / City and Guilds / Vocational
   f) Degree
   g) Postgrad
   h) Other

APPENDIX 5

Structure Clinical Interview Screening Questions

SCID-II PQ

90	Have you often become frantic when you thought that someone you really cared about was going to leave you?	**NO**	**YES**	PQ93
91	Do your relationships with people you really care about have lots of extreme ups and downs?	**NO**	**YES**	PQ94
92	Have you all of a sudden changed your sense of who you are and where you are headed?	**NO**	**YES**	PQ95
93	Does your sense of who you are often change dramatically?	**NO**	**YES**	PQ96
94	Are you different with people or in different situations, so that you sometime don't know who you really are?			PQ97
95	Have there been lots of sudden changes, in your goals, career plans, religious beliefs and so on ?	**NO**	**YES**	PQ98
96	Have you often done things impulsively?	**NO**	**YES**	PQ99
97	Have you tried to hurt or kill yourself or threatened to do so?	**NO**	**YES**	PQ100
98	Have you ever cut, burned, or scratched yourself on purpose?	**NO**	**YES**	PQ101
99	Do you have a lot of sudden mood changes?	**NO**	**YES**	PQ102
100	Do you often feel empty inside?	**NO**	**YES**	PQ103
101	Do you often have temper outbursts or get so angry that you lose control?	**NO**	**YES**	PQ104
102	Do you hit people or throw things when you get angry?	**NO**	**YES**	PQ105
103	Do even little things get you very angry?	**NO**	**YES**	PQ106
104	When you are under a lot of stress, do you get suspicious of other people or feel especially spaced out?	**NO**	**YES**	PQ107

SCID-II PQ

105	Before you were 15, would you bully or threaten other kids?	**NO**	**YES**	PQ108
106	Before you were 15, would you start fights?	**NO**	**YES**	PQ109
107	Before you were 15, did you hurt or threaten someone with a weapon like a bat, brick, broken bottle, knife or gun?	**NO**	**YES**	PQ110
108	Before you were 15, did you deliberately torture someone or cause someone physical pain and suffering?	**NO**	**YES**	PQ111
109	Before you were 15, did you torture or hurt animals on purpose?			PQ112
110	Before you were 15, did you rob, mug, or forcibly take something from someone by threatening him or her?	**NO**	**YES**	PQ113
111	Before you were 15, did you force someone to have sex with you, or get undressed inform of you, or to touch you sexually?	**NO**	**YES**	PQ114
112	Before you were 15, did you set fires?	**NO**	**YES**	PQ115
113	Before you were 15, did you deliberately destroy things that wasn't yours?	**NO**	**YES**	PQ116
114	Before you were 15, did you break into house, other buildings, or cars?	**NO**	**YES**	PQ117
115	Before you were 15, did you lie a lot or 'con' other people?	**NO**	**YES**	PQ118
116	Before you were 15, did you sometimes steal or shoplift things or forge someone's signature?	**NO**	**YES**	PQ119
117	Before you were 15, did you run away from home and stay away overnight?	**NO**	**YES**	PQ120
118	Before you were 13, did you often stay out very late, long after the time you were supposed to be home?	**NO**	**YES**	PQ121
119	Before you were 13, did you often skip school?	**NO**	**YES**	PQ122

APPENDIX 6

Structure Clinical Interview Follow Up Questions

BPD

BORDERLINE PERSONALITY DIS

A pervasive pattern of instability of interpersonal relationships, self-image, and affects and marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

90. You've said that you have *[Have you]* often become frantic when you thought that someone you really cared about was going to leave you.

    What have you done?

    (Have you threatened or pleaded with him/her?)

(1) frantic efforts to avoid real or imagined abandonment (**Note:** Do not include suicidal or self-mutilating behavior covered in item (5).)

3 = several examples

? 1 2 3 | 11:

91. You've said that *[Do]* your relationships with people you really care about have lots of extreme ups and downs.

    Tell me about them.

    (Were there times when you thought they were everything you wanted and other times when you thought they were terrible? How many relationships were like this?)

(2) a pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation

3 = either one prolonged relationship or several briefer relationships in which the alternating pattern occurs at least twice

? 1 2 3 | 113

? = inadequate information 1 = absent or false 2 = subthreshold 3 = threshold or true

BPD

92. You've said that you have *[Have you]* all of a sudden changed your sense of who you are and where you are headed.

    Give me some examples of this.

93. You've said that your sense of who you are often changes *[Does your sense of who you are often change]* dramatically.

    Tell me more about that.

94. You've said that you are *[Are you]* different with different people or in different situations so that you sometimes don't know who you really are.

    Give me some examples of this. (Do you feel this way a lot?)

95. You've said that there have been *[Have there been]* lots of sudden changes in your goals, career plans, religious beliefs, and so on.

    Tell me more about that.

(3) identity disturbance: markedly and persistently unstable self-image or sense of self

[Note: Do not include normal adolescent uncertainty.]

3 = acknowledges trait

? 1 2 3 | 114

96. You've said that you've *[Have you]* often done things impulsively.

    What kinds of things?

    (How about . . .
    . . . buying things you really couldn't afford?
    . . . having sex with people you hardly know, or "unsafe sex"?
    . . . drinking too much or taking drugs?
    . . . driving recklessly?
    . . . uncontrollable eating?)

(4) impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (**Note:** Do not include suicidal or self-mutilating behavior covered in item (5).)

3 = several examples indicating a pattern of impulsive behavior (not necessarily limited to examples given above)

? 1 2 3 | 115

BPD

IF YES TO ANY OF ABOVE: Tell me about that. How often does it happen? What kinds of problems has it caused?

97. You've said that you have *[Have you]* tried to hurt or kill yourself or threatened to do so.	(5) recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior 3 = two or more events (when not in a Major Depressive Episode)	?	1	2	3	116
98. You've said that you have *[Have you ever]* cut, burned, or scratched yourself on purpose. Tell me about that.						
99. You've said that *[Do]* you have a lot of sudden mood changes. Tell me about that. (How long do your "bad" moods last? How often do these mood changes happen? How suddenly do your moods change?)	(6) affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days) 3 = acknowledges trait	?	1	2	3	117
100. You've said that *[Do]* you often feel empty inside. Tell me more about this.	(7) chronic feelings of emptiness 3 = acknowledges trait	?	1	2	3	118
101. You've said that *[Do]* you often have temper outbursts or get so angry that you lose control. Tell me about this.	(8) inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights) 3 = acknowledges trait and at least one example	?	1	2	3	119

102. You've said that *[Do]* you hit people or throw things when you get angry.

Tell me about this.

(Does this happen often?)

103. You've said that *[Do]* even little things get you very angry.

When does this happen?

(Does this happen often?)

104. You've said that when you are under a lot of stress, you *[When you are under a lot of stress, do you]* get suspicious of other people or feel especially spaced out.

Tell me about that.

(9) transient, stress-related paranoid ideation or severe dissociative symptoms

3 = several examples that do not occur exclusively during a Psychotic Disorder or a Mood Disorder With Psychotic Features

? 1 2 3 120

AT LEAST FIVE ITEMS ARE CODED "3"

1 3 121

↓

BORDERLINE PERSONALITY DISORDER

? = inadequate information 1 = absent or false 2 = subthreshold 3 = threshold or true

ANTISOCIAL PERSONALITY DISORDER

	ANTISOCIAL PERSONALITY DISORDER CRITERIA					
Note: Behavior should NOT be considered characteristic of Antisocial Personality Disorder if it occurs exclusively during the course of Schizophrenia or a Manic Episode.	B. The individual is at least age 18 years. C. There is evidence of Conduct Disorder with onset before age 15 years [as evidenced by at least two of the following:]	?	1	2	3	122
105. You've said that before you were 15, you would *[Before you were 15, would you]* bully or threaten other kids. Tell me about that.	(1) (Before the age of 15) often bullied, threatened, or intimidated others	?	1	2	3	123
106. You've said that before you were 15, you would *[Before you were 15, would you]* start fights. How often?	(2) (Before the age of 15) often initiated physical fights	?	1	2	3	124
107. You've said that before you were 15, you hurt or threatened someone *[Before you were 15, did you hurt or threaten someone]* with a weapon, like a bat, brick, broken bottle, knife, or gun. Tell me about that.	(3) (Before the age of 15) used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun)	?	1	2	3	125
108. You've said that before you were 15, you deliberately tortured someone or caused someone physical pain and suffering. *[Before you were 15, did you deliberately torture someone or cause someone physical pain and suffering?]* What did you do?	(4) (Before the age of 15) was physically cruel to people	?	1	2	3	126

APD

109. You've said that before you were 15 you tortured or hurt animals on purpose. *[Before you were 15, did you torture or hurt animals on purpose?]* What did you do?	(5) (Before the age of 15) was physically cruel to animals	?	1	2	3	127
110. You've said that before you were 15, you robbed, mugged, or forcibly took *[Before you were 15, did you rob, mug, or forcibly take]* something from someone by threatening him or her. Tell me about that.	(6) (Before the age of 15) stole while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)	?	1	2	3	128
111. You've said that before you were 15, you forced someone *[Before you were 15, did you force someone]* to have sex with you, to get undressed in front of you, or to touch you sexually. Tell me about it.	(7) (Before the age of 15) forced someone into sexual activity	?	1	2	3	129
112. You've said that before you were 15 you *[Before you were 15, did you]* set fires. Tell me about that.	(8) (Before the age of 15) deliberately engaged in fire setting with the intention of causing serious damage	?	1	2	3	130
113. You've said that before you were 15, you deliberately destroyed *[Before you were 15, did you deliberately destroy]* things that weren't yours. What did you do?	(9) (Before the age of 15) deliberately destroyed others' property (other than by fire setting)	?	1	2	3	131
114. You've said that before you were 15, you broke *[Before you were 15, did you break]* into houses, other buildings, or cars. Tell me about that.	(10) (Before the age of 15) broke into someone else's house, building, or car	?	1	2	3	132

? = inadequate information 1 = absent or false 2 = subthreshold 3 = threshold or true

APD

115. You've said that before you were 15, you lied a lot or "conned" *[Before you were 15, did you lie a lot or "con"]* other people. What would you lie about?	(11) (Before the age of 15) often lied to obtain goods or favors or to avoid obligations (i.e., "cons" others)	? 1 2 3	133
116. You've said that before you were 15, you sometimes stole or shoplifted things or forged someone's signature. *[Before you were 15, did you sometimes steal or shoplift things or forge someone's signature?]* Tell me about it.	(12) (Before the age of 15) stole items of nontrivial value without confronting a victim (e.g., shoplifting, stealing but without breaking and entering, forgery)	? 1 2 3	134
117. You've said that before you were 15, you ran away from home and stayed *[Before you were 15, did you run away and stay]* away overnight. Was that more than once? (With whom were you living at the time?)	(13) (Before the age of 15) ran away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)	? 1 2 3	135
118. You've said that before you were 13, you would *[Before you were 13, did you]* often stay out very late, long after the time you were supposed to be home. How often?	(14) (Before the age of 13) often stayed out at night despite parental prohibitions	? 1 2 3	136

119. You've said that before you were 13, you often skipped *[Before you were 13, did you often skip]* school.

How often?

(15) (Before the age of 13) often truant from school — ? 1 2 3 — 137

AT LEAST TWO ITEMS ARE CODED "3" (i.e., "some" evidence of Conduct Disorder) — 1 3 — 138

→ **CRITERION C OF ANTISOCIAL PERSONALITY DISORDER MET; CONTINUE ON NEXT PAGE**

→ **GO TO PERSONALITY DISORDER NOT OTHERWISE SPECIFIED, PAGE 41**

APD

Now, since you were 15. . .	A. There is a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years, as indicated by three (or more) of the following:					
Have you done things that are against the law—even if you weren't caught—like stealing, using or selling drugs, writing bad checks, or having sex for money? IF NO: Have you ever been arrested for anything?	(1) failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest 3 = several examples	?	1	2	3	139
Do you often find that you have to lie to get what you want? (Have you ever used an alias or pretended you were someone else?) (Have you often "conned" others to get what you want?)	(2) deceitfulness, as indicated by repeated lying, use of aliases, or "conning" others for personal profit or pleasure 3 = several examples	?	1	2	3	140
Do you often do things on the spur of the moment without thinking about how it will affect you or other people? What kinds of things? Was there ever a time when you had no regular place to live? (For how long?)	(3) impulsivity or failure to plan ahead 3 = several examples	?	1	2	3	141

? = inadequate information 1 = absent or false 2 = subthreshold 3 = threshold or true

(Since you were 15) have you been in any fights? (How often?) Have you ever hit or thrown things at your spouse or partner? (How often?) Have you ever hit a child, yours or someone else's—so hard that he or she had bruises or had to stay in bed or see a doctor? Tell me about that. Have you physically threatened or hurt anyone else? Tell me about that. (How often?)	(4) irritability and aggressiveness, as indicated by repeated physical fights or assaults 3 = several examples	?	1	2	3	142
Did you ever drive a car when you were drunk or high? How many speeding tickets have you gotten or car accidents have you been in? Do you always use protection if you have sex with someone you don't know well? (Has anyone ever said that you allowed a child that you were taking care of to be in a dangerous situation?)	(5) reckless disregard for safety of self or others 3 = several examples	?	1	2	3	143

How much of the time in the last 5 years were you not working?

IF FOR A PROLONGED PERIOD: Why? (Was there work available?)

When you were working, did you miss a lot of work?

IF YES: Why?

Did you ever walk off a job without having another one to go to?

IF YES: How many times did this happen?

Have you ever owed people money and not paid them back? (How often?)

What about not paying child support, or not giving money to children or someone else who depended on you?

(6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations

3 = several examples

? 1 2 3 | 144

IF THERE IS EVIDENCE OF ANTISOCIAL ACTS AND IT IS UNCLEAR WHETHER THERE IS ANY REMORSE: How do you feel about [LIST ANTISOCIAL ACTS]?

(Do you think what you did was wrong in any way?)

(7) lacks remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another

3 = lacks remorse about several antisocial acts

? 1 2 3 | 145

APPENDIX 7

Personality Belief Questionnaire

PBQ

Belief Questionnaire

Name_____ Date:_____

Please read the statements below and rate HOW MUCH YOU BELIEVE EACH ONE. Try to judge how you feel about each statement MOST OF THE TIME.

4	3	2	1	0
I Believe it Totally	I Believe it Very Much	I Believe it Moderately	I Believe it Slightly	I Don't Believe it at all

Example	HOW MUCH DO YOU BELIEVE IT?				
1. The world is a dangerous place. (Please circle)	4 Totally	3 Very Much	2 Moderately	1 Slightly	0 Not at All
1. I am socially inept and socially undesirable in work or social situations.	4	3	2	1	0
2. Other people are potentially critical, indifferent, demeaning, or rejecting.	4	3	2	1	0
3. I cannot tolerate unpleasant feelings.	4	3	2	1	0
4. If people get close to me, they will discover the "real" me and reject me.	4	3	2	1	0
5. Being exposed as inferior or inadequate will be intolerable.	4	3	2	1	0
6. I should avoid unpleasant situations at all cost.	4	3	2	1	0
7. If I feel or think something unpleasant, I should try to wipe it out or distract myself (for example, think of something else, have a drink, take a drug, or watch television).	4	3	2	1	0
8. I should avoid situations in which I attract attention, or be as inconspicuous as possible.	4	3	2	1	0
9. Unpleasant feelings will escalate and get out of control.	4	3	2	1	0

		HOW MUCH DO YOU BELIEVE IT?				
		Totally	Very Much	Moderately	Slightly	Not at All
10.	If others criticize me, they must be right.	4	3	2	1	0
11.	It is better not to do anything than to try something that might fail.	4	3	2	1	0
12.	If I don't think about a problem, I don't have to do anything about it.	4	3	2	1	0
13.	Any signs of tension in a relationship indicate the relationship has gone bad; therefore, I should cut it off.	4	3	2	1	0
14.	If I ignore a problem, it will go away.	4	3	2	1	0
15.	I am needy and weak.	4	3	2	1	0
16.	I need somebody around available at all times to help me to carry out what I need to do or in case something bad happens.	4	3	2	1	0
17.	My helper can be nurturant, supportive, and confident -- if he or she wants to be.	4	3	2	1	0
18.	I am helpless when I'm left on my own.	4	3	2	1	0
19.	I am basically alone -- unless I can attach myself to a stronger person.	4	3	2	1	0
20.	The worst possible thing would be to be abandoned.	4	3	2	1	0
21.	If I am not loved, I will always be unhappy.	4	3	2	1	0
22.	I must do nothing to offend my supporter or helper.	4	3	2	1	0
23.	I must be subservient in order to maintain his or her good will.	4	3	2	1	0
24.	I must maintain access to him or her at all times.	4	3	2	1	0
25.	I should cultivate as intimate a relationship as possible.	4	3	2	1	0

	HOW MUCH DO YOU BELIEVE IT?				
	Totally	Very Much	Moderately	Slightly	Not at All
26. I can't make decisions on my own.	4	3	2	1	0
27. I can't cope as other people can.	4	3	2	1	0
28. I need others to help me make decisions or tell me what to do.	4	3	2	1	0
29. I am self-sufficient, but I do need others to help me reach my goals.	4	3	2	1	0
30. The only way I can preserve my self-respect is by asserting myself indirectly; for example, by not carrying out instructions exactly.	4	3	2	1	0
31. I like to be attached to people but I am unwilling to pay the price of being dominated.	4	3	2	1	0
32. Authority figures tend to be intrusive, demanding, interfering, and controlling.	4	3	2	1	0
33. I have to resist the domination of authorities but at the same time maintain their approval and acceptance.	4	3	2	1	0
34. Being controlled or dominated by others is intolerable.	4	3	2	1	0
35. I have to do things my own way.	4	3	2	1	0
36. Making deadlines, complying with demands, and conforming are direct blows to my pride and self-sufficiency.	4	3	2	1	0
37. If I follow the rules the way people expect, it will inhibit my freedom of action.	4	3	2	1	0
38. It is best not to express my anger directly but to show my displeasure by not conforming.	4	3	2	1	0
39. I know what's best for me and other people shouldn't tell me what to do.	4	3	2	1	0

	HOW MUCH DO YOU BELIEVE IT?				
	Totally	Very Much	Moderately	Slightly	Not at All
40. Rules are arbitrary and stifle me.	4	3	2	1	0
41. Other people are often too demanding.	4	3	2	1	0
42. If I regard people as too bossy, I have a right to disregard their demands.	4	3	2	1	0
43. I am fully responsible for myself and others.	4	3	2	1	0
44. I have to depend on myself to see that things get done.	4	3	2	1	0
45. Others tend to be too casual, often irresponsible, self-indulgent, or incompetent.	4	3	2	1	0
46. It is important to do a perfect job on everything.	4	3	2	1	0
47. I need order, systems, and rules in order to get the job done properly.	4	3	2	1	0
48. If I don't have systems, everything will fall apart.	4	3	2	1	0
49. Any flaw or defect of performance may lead to a catastrophe.	4	3	2	1	0
50. It is necessary to stick to the highest standards at all times, or things will fall apart.	4	3	2	1	0
51. I need to be in complete control of my emotions.	4	3	2	1	0
52. People should do things my way.	4	3	2	1	0
53. If I don't perform at the highest level, I will fail.	4	3	2	1	0
54. Flaws, defects, or mistakes are intolerable.	4	3	2	1	0
55. Details are extremely important.	4	3	2	1	0

		HOW MUCH DO YOU BELIEVE IT?				
		Totally	Very Much	Moderately	Slightly	Not at All
56.	My way of doing things is generally the best way.	4	3	2	1	0
57.	I have to look out for myself.	4	3	2	1	0
58.	Force or cunning is the best way to get things done.	4	3	2	1	0
59.	We live in a jungle and the strong person is the one who survives.	4	3	2	1	0
60.	People will get at me if I don't get them first.	4	3	2	1	0
61.	It is not important to keep promises or honor debts.	4	3	2	1	0
62.	Lying and cheating are OK as long as you don't get caught.	4	3	2	1	0
63.	I have been unfairly treated and am entitled to get my fair share by whatever means I can.	4	3	2	1	0
64.	Other people are weak and deserve to be taken.	4	3	2	1	0
65.	If I don't push other people, I will get pushed around.	4	3	2	1	0
66.	I should do whatever I can get away with.	4	3	2	1	0
67.	What others think of me doesn't really matter.	4	3	2	1	0
68.	If I want something, I should do whatever is necessary to get it.	4	3	2	1	0
69.	I can get away with things so I don't need to worry about bad consequences.	4	3	2	1	0
70.	If people can't take care of themselves, that's their problem	4	3	2	1	0

		HOW MUCH DO YOU BELIEVE IT?				
		Totally	Very Much	Moderately	Slightly	Not at All
71.	I am a very special person.	4	3	2	1	0
72.	Since I am so superior, I am entitled to special treatment and privileges.	4	3	2	1	0
73.	I don't have to be bound by the rules that apply to other people.	4	3	2	1	0
74.	It is very important to get recognition, praise, and admiration.	4	3	2	1	0
75.	If others don't respect my status, they should be punished.	4	3	2	1	0
76.	Other people should satisfy my needs.	4	3	2	1	0
77.	Other people should recognize how special I am.	4	3	2	1	0
78.	It's intolerable if I'm not accorded my due respect or don't get what I'm entitled to.	4	3	2	1	0
79.	Other people don't deserve the admiration or riches they get.	4	3	2	1	0
80.	People have no right to criticize me.	4	3	2	1	0
81.	No one's needs should interfere with my own.	4	3	2	1	0
82.	Since I am so talented, people should go out of their way to promote my career.	4	3	2	1	0
83.	Only people as brilliant as I am understand me.	4	3	2	1	0
84.	I have every reason to expect grand things.	4	3	2	1	0
85.	I am an interesting, exciting person.	4	3	2	1	0
86.	In order to be happy, I need other people to pay attention to me.	4	3	2	1	0

		HOW MUCH DO YOU BELIEVE IT?				
		Totally	Very Much	Moderately	Slightly	Not at All
87.	Unless I entertain or impress people, I am nothing.	4	3	2	1	0
88.	If I don't keep others engaged with me, they won't like me.	4	3	2	1	0
89.	The way to get what I want is to dazzle or amuse people.	4	3	2	1	0
90.	If people don't respond very positively to me, they are rotten.	4	3	2	1	0
91.	It is awful if people ignore me.	4	3	2	1	0
92.	I should be the center of attention.	4	3	2	1	0
93.	I don't have to bother to think things through -- I can go by my "gut" feeling.	4	3	2	1	0
94.	If I entertain people, they will not notice my weaknesses.	4	3	2	1	0
95.	I cannot tolerate boredom.	4	3	2	1	0
96.	If I feel like doing something, I should go ahead and do it.	4	3	2	1	0
97.	People will pay attention only if I act in extreme ways.	4	3	2	1	0
98.	Feelings and intuition are much more important than rational thinking and planning.	4	3	2	1	0
99.	It doesn't matter what other people think of me.	4	3	2	1	0
100.	It is important for me to be free and independent of others.	4	3	2	1	0
101.	I enjoy doing things more by myself than with other people.	4	3	2	1	0
102.	In many situations, I am better off to be left alone.	4	3	2	1	0

	HOW MUCH DO YOU BELIEVE IT?				
	Totally	Very Much	Moderately	Slightly	Not at All
103. I am not influenced by others in what I decide to do.	4	3	2	1	0
104. Intimate relations with other people are not important to me.	4	3	2	1	0
105. I set my own standards and goals for myself.	4	3	2	1	0
106. My privacy is much more important to me than closeness to people.	4	3	2	1	0
107. What other people think doesn't matter to me.	4	3	2	1	0
108. I can manage things on my own without anybody's help.	4	3	2	1	0
109. It's better to be alone than to feel "stuck" with other people.	4	3	2	1	0
110. I shouldn't confide in others.	4	3	2	1	0
111. I can use other people for my own purposes as long as I don't get involved.	4	3	2	1	0
112. Relationships are messy and interfere with freedom.	4	3	2	1	0
113. I cannot trust other people.	4	3	2	1	0
114. Other people have hidden motives.	4	3	2	1	0
115. Others will try to use me or manipulate me if I don't watch out.	4	3	2	1	0
116. I have to be on guard at all times.	4	3	2	1	0
117. It isn't safe to confide in other people.	4	3	2	1	0
118. If people act friendly, they may be trying to use or exploit me.	4	3	2	1	0
119. People will take advantage of me if I give them the chance.	4	3	2	1	0

		HOW MUCH DO YOU BELIEVE IT?				
		Totally	Very Much	Moderately	Slightly	Not at All
120.	For the most part, other people are unfriendly.	4	3	2	1	0
121.	Other people will deliberately try to demean me.	4	3	2	1	0
122.	Oftentimes people deliberately want to annoy me.	4	3	2	1	0
123.	I will be in serious trouble if I let other people think they can get away with mistreating me.	4	3	2	1	0
124.	If other people find out things about me, they will use them against me.	4	3	2	1	0
125.	People often say one thing and mean something else.	4	3	2	1	0
126.	A person whom I am close to could be disloyal or unfaithful.	4	3	2	1	0

APPENDIX 8

Marlowe-Crowne Social Desirability Scale (SDS)

CONFIDENTIAL

Listed below are a number of statements concerning people's views and how they tend to behave. Read each statement and decide if it is true or false for you. *If it is true for you circle the 'T'. if it is false for you, circle the 'F'.*

1	Before I vote. I always thoroughly investigate the qualifications of the candidates.	T	F
2	I never hesitate to go out of my way to help someone in trouble.	T	F
3	It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
4	I have never intensely disliked anyone.	T	F
5	On occasion. I have doubt about my ability to succeed in life.	T	F
6	I sometime feel resentful when I don't get my own way.	T	F
7	I am always careful about my manner of dress.	T	F
8	My table manners at home are as good as when I eat in a restaurant.	T	F
9	If I could get into a movie without paying and be sure I was not seen. I would probably do it.	T	F
10	On a few occasions. I have given up doing something because I thought too little of my ability	T	F
11	I like to gossip at times	T	F
12	There have been times when I felt like rebelling against people in authority even though I knew they were right.	T	F
13	No matter who I'm taking to. I'm always a good listener.	T	F
14	I can remember 'playing sick' to get out of something.	T	F
15	There have been occasions when I have taken advantage of someone	T	F
16	I'm always willing to admit it when I make a mistake	T	F
17	I always try to practice what I preach	T	F
18	I don't find it particularly difficult to get along with loudmouthed. obnoxious people	T	F
19	I sometimes try to get even rather than forgive and forget	T	F
20	When I don't know something, I don't mind admitting it	T	F
21	I am always courteous. even to people who are disagreeable	T	F
22	At time I have really insisted on having things done my own way	T	F
23	There have been occasions when I felt like smashing things	T	F
24	I would never think of letting someone else be punished for my wrongdoings	T	F
25	I never resent being asked to return a favour	T	F
26	I have never been irked when people express ideas very different from my own	T	F
27	I never make a long trip without checking the safety of my car	T	F
28	There have been times when I have been quite jealous of the good fortunes of others	T	F
29	I have almost never felt the urge to tell someone off	T	F
30	I am sometimes irritated by people who ask favours of me	T	F
31	I have never felt that I have been punished without cause	T	F
32	I sometimes think when people have a misfortune. they only got what they deserved	T	F
33	I have never deliberately said something that hurt someone's feelings	T	F

APPENDIX 9

Diagnostic Criteria for Antisocial and Borderline Personality Disorders

DSM-IV Diagnostic Criteria for Antisocial Personality Disorder (APA, 1994)

A. There is a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years, as indicated by three (or more) of the following:
    1. failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
    2. deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
    3. impulsivity or failure to plan ahead
    4. irritability and aggressiveness, as indicated by repeated physical fights or assaults
    5. reckless disregard for safety of self or others
    6. consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations
    7. lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another
B. The individual is at least age 18 years.
C. There is evidence of conduct disorder with onset before age 15 years.
D. The occurrence of antisocial behavior is not exclusively during the course of Schizophrenia or a Manic Episode.

Diagnostic Criteria for Borderline Personality Disorder (APA, 1994)

A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. frantic efforts to avoid real or imagined abandonment. **Note:** Do not include suicidal or self-mutilating behavior covered in Criterion 5.
2. a pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation
3. identity disturbance: markedly and persistently unstable self-image or sense of self
4. impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). **Note:** Do not include suicidal or self-mutilating behavior covered in Criterion 5.
5. recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior
6. affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days)
7. chronic feelings of emptiness
8. inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights)
9. transient, stress-related paranoid ideation or severe dissociative symptoms